
WS_FTP Pro

User's Guide

Software Version 6.5

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Table of Contents

Chapter 1: Introduction	1
Why FTP?	1
How FTP Works	2
Logging Onto an FTP Site	3
Interfaces for Windows 95, 98, 2000, and NT	4
The “Classic” Interface of WS_FTP Pro.	4
The “Explorer” Interface of WS_FTP Pro	5
Features	6
System Requirements	7
Note for Users of Windows 3.1	7
Installing WS_FTP Pro	7
Browser Integration (Classic Interface Only)	8
Other Ipswitch WS_FTP Products	9
WS_FTP Server.	9
WS_FTP Pro Development Kit	9
Getting Updates and Giving Feedback	10
Uninstalling	11
Chapter 2: Getting Started	13
Starting WS_FTP Pro	13
Preconfigured FTP Sites	13
The “Connection” Dialog Box (Classic Interface Only)	14
Selecting an FTP Site and Connecting	15
Selecting a Configured Site	16
Configuring a New FTP Site	17
Guidelines for Entering Site Name	17
Guidelines for Entering the FTP Site’s Host Name or IP Address	18
Guidelines for Entering User ID, Password, and Account	18
Entering Other Host Information	19
Quick Connect (Classic Interface Only)	20
Selecting a Site You Visited Recently (Classic Interface Only)	21
Notes About Passwords	22
Site Configuration Settings	23
Setting the Remote Port	23
Retrying the Connection	23
Sending a Command to an FTP Site	24
Changing the Host Type	24
Commenting on an FTP Site	25
Setting a Default E-mail Address for Anonymous Logins	25
Organizing Sites in Folders	26
Creating a New Folder	26

Disconnecting from an FTP Site	27
Deleting a Configured FTP Site.....	27
Chapter 3: Viewing and Navigating Files and Folders	29
Finding Files and Folders.....	30
Viewing Listings of Files and Folders.....	30
Displaying Directory Information (Classic Interface Only)	30
Sorting Files and Folders	31
Limiting the Display of Files Using a Mask	32
Changing the Current Drive.....	33
Changing the Current Folder	34
Remembering Folders (Classic Interface Only).....	34
Creating a Folder on an FTP Site.....	35
Setting the Startup Folder on an FTP Site	35
Changing the Startup Folder on Your PC	36
Setting the Startup Folders While You Are Logged On (Classic Interface Only).....	36
Chapter 4: Transferring Files	39
Dragging and Dropping	39
Moving Files	40
Appending Files (Classic Interface Only)	41
Viewing a File	41
Editing a File	43
Executing a File	45
Working with Transfer Modes.....	46
Selecting the Transfer Mode for a Particular Transfer	47
Startup Transfer Mode	47
Doing Passive Transfers.....	49
Restarting Failed or Interrupted Transfers	50
Setting the Network Timeout.....	51
Setting Network Buffer Sizes (Classic Interface Only).....	52
Transferring a Hidden File.....	53
Monitoring the Progress of Transfers	53
Setting the Transfer Rate Display (Classic Interface Only)	55
Confirming Overwrites	55
Using Sound to Indicate Success or Failure (Classic Interface Only).....	56
Disabling Sounds (Classic Interface Only).....	57
Viewing the Protocol Conversation	58
Viewing the Transfer Log (Ws_ftp.log)	62
Saving Debug Messages	63

Chapter 5: Working with Files and Folders	65
Preserving File Date and Time.	65
Important Note about Uploads	66
Transferring Only Newer Files (Classic Interface Only).	66
Adjusting for a Different Time Zone	66
Setting the Date Format (Classic Interface Only)	67
Deleting Files and Folders	68
Important Notes.	68
Deleting Non-Empty Folders from an FTP Site	68
Confirming Deletions.	69
Renaming a File Before or After Transfer	70
Renaming a File As You Transfer It	70
Getting Prompted for Path and File Name.	72
Converting File Names to Lowercase Letters	73
Having the FTP Site Assign a Unique File Name (Classic Interface Only)	74
Having WS_FTP Pro Assign a Unique File Name (Classic Interface Only).	75
Converting File Extensions (Classic Interface Only)	75
Changing the Permissions for UNIX Files	77
Background Information.	77
Chapter 6: Using Firewalls	81
Multiple Firewalls	81
Firewall Types	82
Configuring a Firewall	82
Using a Configured Firewall	84
Chapter 7: FTP Commands Pop-up Menu.	87
Chapter 8: The Find Utility	91
Using the Find Utility	91
Using the Search Results.	92
Examples	93
Finding a File When You Are Not Sure of Its Name	93
Finding a File Modified During a Specific Time Period	94
Finding a File in a Particular Folder	94
Finding a File Smaller Than a Certain Size	96
Chapter 9: Scripting	97
Writing and Debugging Scripts	98
Executing Scripts	98
Executing a Script from the Command Prompt	98
Running a Script from the Scripting Utility	99
Example	99

Chapter 10: Synchronizing Files and Folders	101
A Word of Caution.....	101
Using the Synchronize Utility	101
Example	102
Chapter 11: Queuing Transfer Tasks	105
Using the Queuing Utility	105
Examples	107
Adding an Existing Script to the Queue	107
Running a Quick Download Using Drag and Drop	108
Updating a Web Site on a Nightly Basis.....	109
Chapter 12: Using the Command Line	111
Basic Command Line Syntax.....	112
Specifying the FTP Site.....	112
Specifying the Site Folder (.ini File).....	112
Uploading Files	113
Renaming Files	113
Downloading Files	114
FTP Site Accounts and Passwords.....	114
Using a Batch File	115
File Transfer Modes.....	116
Transferring Multiple Files from the Same Location	116
Multiple Folders or Commands	117
Pre-scheduled Transfers (“Automated Transfers”)	117
Transferring a Folder Containing Subfolders	118
Converting File Names to Lower Case	119
Transferring Files with Spaces in the File Names	119
Enclosing the Command Line in Quotes.....	120
Using the MS-DOS Name.....	120
Doing a Wildcard Transfer	120
Using an IP Address, Host Name, or FTP URL	120
Extras	121
Troubleshooting.....	121
Summary	122
Appendix A: Highlights of RFC 959.....	123
Basics	123
FTP Commands	124
FTP Replies	131
Positive Preliminary Replies.....	131
Positive Completion Replies.....	131
Positive Intermediate Replies	132
Transient Negative Completion Replies	132
Permanent Negative Completion Replies	132

Appendix B: Textual Error Messages	135
“Blocking call canceled”	135
“Cannot create file”	136
“Cannot create socket”	136
“Can’t get ‘xxx’ host entry”	136
“Can’t open file for write”	136
“Can’t set guest privileges”	137
“Connection refused”	137
“Directory identifier unavailable”	137
“Disk quota exceeded”	137
“DoDirList failed”	137
“DoDirList returned 4”	137
“Error registering class”	138
“Failed data channel”	138
“File too large to download”	138
“Illegal port command”	138
“Invalid page fault”	138
“Logon failure; Quitting.”	138
“MDTM”	138
“Port command failed”	139
“Too Many Parameters Specified in Explorer Interface”	139
“User access denied”	139
“Write error”	139
Appendix C: Troubleshooting	141
Problem: Connecting to an FTP site	141
Problem: Connecting Only to Ipswitch FTP Site	142
Problem: Can Only Connect Using IP Address	142
Problem: Connection Closes	142
Problem: Delays Under Windows 3.x	142
Problem: WS_FTP Pro Won’t Work with AOL, Netcom, or CompuServe	142
Problem: Only Part of the File is Transferred	143
Problem: File List Missing, Blank, or Unreadable	143
Problem: Determining the Host Type	144
Problem: Converting File Names	145
Problem: Time Displays as 00:00	145
Problem: Timestamp Problems on Uploads	146
Problem: Unable to Open/View Files and Folders	146
Problem: Corrupted Files or Strange Characters	146

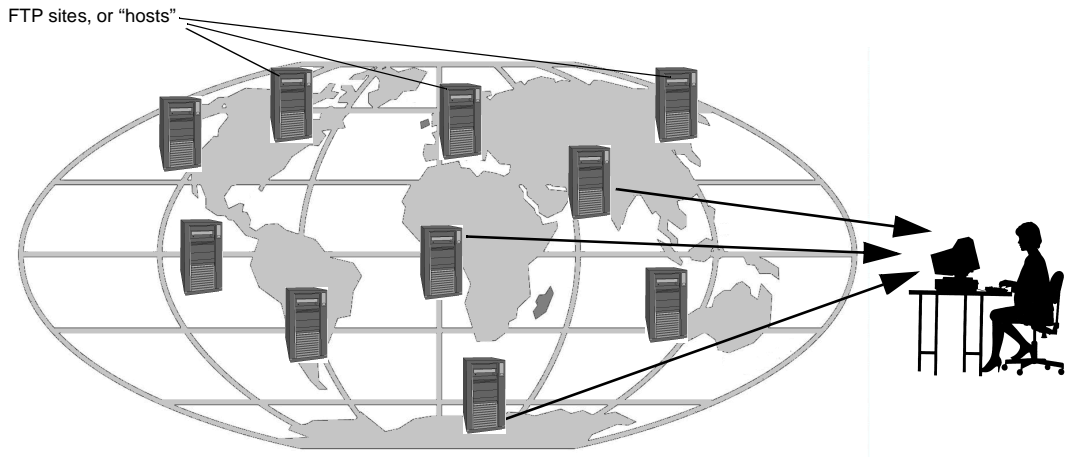
Chapter 1: Introduction

This chapter offers an introduction to WS_FTP Pro, a brief description of File Transfer Protocol, system requirements, the installation procedure, information about software updates, and instructions for giving feedback to Ipswitch, Inc.

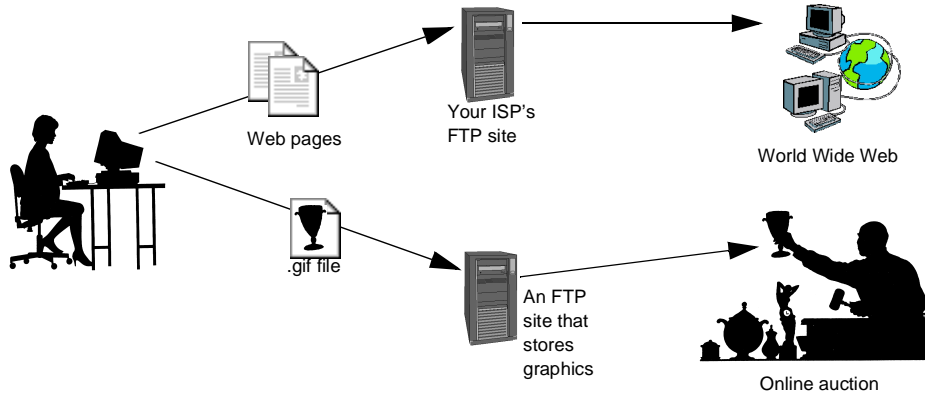
Why FTP?

Organizations such as corporations, governments, and educational institutions make available a vast store of software applications, games, images, and other types of files using FTP sites. An FTP site is a computer system (“host”) that uses an Internet protocol (a set of standards and procedures) called FTP, File Transfer Protocol. FTP offers fast and accurate transfer of large files or collections of files between computers on the Internet.

Many Web sites on the World Wide Web (which is based on another Internet protocol called HTTP) also provide links to files you can *download* -- that is, copy to your PC. Especially for large files, WS_FTP Pro will speed up the time it takes to copy such files to your PC. For more information, see “Browser Integration (Classic Interface Only)” on page 8.



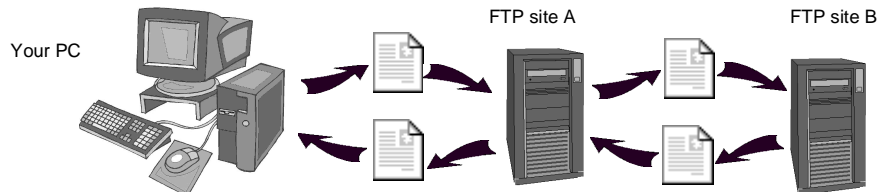
WS_FTP Pro also allows you to *upload* files -- that is, copy files from your PC to other computers. For example, you would upload files if you need to place your Web pages on a computer system designated by your ISP (Internet Service Provider), or if you want to store a picture of something you want to sell through an online auction site.



How FTP Works

File Transfer Protocol uses the client-server model: one computer runs a *server* program “serving up” information to other computers. The other computers run *client* programs requesting information and receiving replies from the server.

WS_FTP Pro turns your PC into an FTP client, allowing it to communicate with virtually all types of FTP sites. When your PC is connected to the Internet (via a modem or local area network), WS_FTP Pro can connect to any system that has a valid Internet Address and contains an FTP server program. Once connected to an FTP site, you can download files, upload files, and (with the Explorer interface) copy files from one FTP site to another.



Logging Onto an FTP Site

The FTP process begins when a connection is made between an FTP client and an FTP site. After establishing communication, the client “logs on” with a user ID and password. The user ID and password identify you to the site.



A screenshot of an FTP client login dialog box. The 'Host Name' field contains 'bday.september11.com'. The 'UserID' field contains 'faithie'. The 'Password' field contains 'xxxxxx'. The 'Account' field is empty. There are three checkboxes: 'Anonymous' (unchecked), 'Save Password' (unchecked), and 'Save Account' (unchecked).

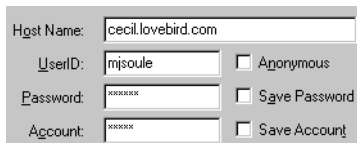
Most public FTP sites are set up with an “Anonymous” account: when you connect to one of these FTP sites, you need only identify yourself as “Anonymous” and use an e-mail address as a password. Normally, when you log on anonymously, you see a public folder (usually named something like */pub* or */apps*) containing the information and software that can be downloaded to your PC. (Access to other folders on the site is usually restricted.)



A screenshot of an FTP client login dialog box. The 'Host Name' field contains 'ftp.ipswitch.com'. The 'UserID' field contains 'anonymous'. The 'Password' field contains 'lwsttp650@'. The 'Account' field is empty. There are three checkboxes: 'Anonymous' (checked), 'Save Password' (unchecked), and 'Save Account' (unchecked).

On anonymous FTP sites, look for files called *readme*, *readme.txt*, *index*, or *00index*. Many sites use a file like this to provide a catalog of the information available on the site as well as other information about the site, such as a mission statement or operating hours.

In addition, an FTP site administrator can also give certain users “accounts” with special permissions. For example, a user with an account may be able to add, delete, and edit files: while an “anonymous” user can only download files. To log on to a site on which you have an account, you’ll need to enter the user name and password that the site administrator has assigned to your account.



A screenshot of an FTP client login dialog box. The 'Host Name' field contains 'cecil.lovebird.com'. The 'UserID' field contains 'mjsoule'. The 'Password' field contains 'xxxxxx'. The 'Account' field contains 'xxxxxx'. There are three checkboxes: 'Anonymous' (unchecked), 'Save Password' (unchecked), and 'Save Account' (unchecked).

Interfaces for Windows 95, 98, 2000, and NT

WS_FTP Pro provides two user interfaces: the “Classic” user interface, which runs as a stand-alone Windows application, and the “Explorer” interface, which integrates with Windows Explorer.

Note

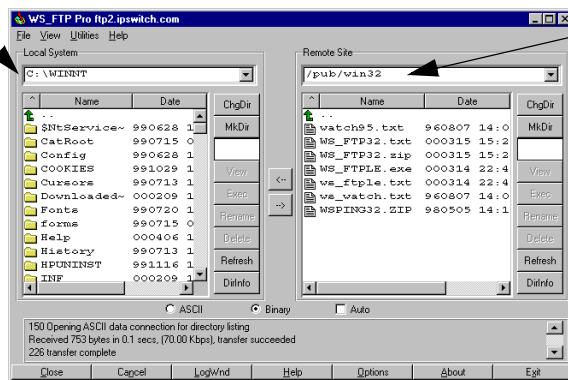
You can install both the Classic and Explorer interfaces and use them interchangeably. The two interfaces can share the FTP site configurations you create in either interface.

The “Classic” Interface of WS_FTP Pro

The Classic interface is a standard Windows application that looks similar to a two-paned window. When your PC (the “Local System”) connects to an FTP server (the “Remote Site”), the WS_FTP Pro Classic interface displays a window with your PC’s files and folders on the left and the FTP site’s files and folders on the right. With the contents of both systems displayed, you can easily locate files on one system and transfer them to a specific folder on the other system. The Classic interface looks similar to this:

The current folder on your PC is shown under the words **Local System**.

This list box shows the files and folders in the current local folder.



The current folder on the FTP site is shown under the words **Remote Site**.

This list box shows the files and folders in the current folder on the FTP site.

The buttons to the right of each list box provide file and folder operations.

The “Explorer” Interface of WS_FTP Pro

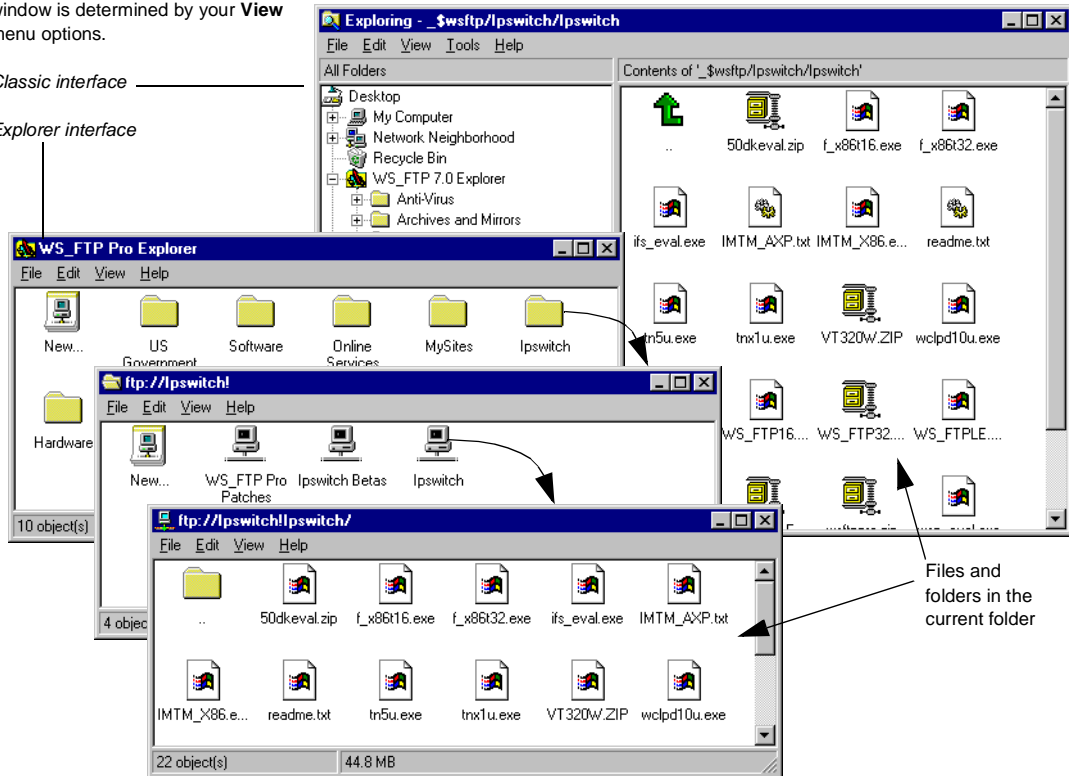
The other interface of WS_FTP Pro is the “Explorer” interface, which is fully integrated with Windows Explorer. The Explorer interface uses the same software “engine” as the Classic interface, but it lets you copy and move files within Windows Explorer. You don’t even have to be aware that you’re using FTP or that the icons you see are FTP sites.

The WS_FTP Pro Explorer interface looks similar to one of these:

The appearance of the Explorer window is determined by your **View** menu options.

Classic interface

Explorer interface



The Explorer interface has just about all the functionality of the Classic interface. However, there are a few features in the Classic interface that are not in the Explorer: the “Connection” dialog box, recently-visited sites on the **File** menu, Quick Connect, the command line, L8 mode transfers, the ability to set buffer size and transfer rate display, specification of the text editor, and appending files.

In addition, the Explorer interface provides a capability not yet part of the Classic interface: the ability to copy from one FTP site to another (the “remote-to-remote” capability).

Features

WS_FTP Pro lets you:

- Connect your PC to a remote FTP site
- Browse files and folders on both the FTP site and your PC
- Copy and move files between your PC and an FTP site
- Copy files directly from one FTP site to another (using the Explorer interface)
- Save and organize connection information for your favorite FTP sites
- Resume interrupted file transfers
- Append a file to another file on the other system
- Track and save the folder paths you visit for quick access
- Find files and folders meeting certain criteria using the WS_FTP Find Utility. This is especially useful for anyone who is looking for one file on a large, complex FTP site.
- Write scripts that automate the transfer and management of files using the WS_FTP Scripting Utility
- Perform file transfers on a pre-defined schedule using the WS_FTP Queuing Utility
- “Mirror” folders and directories between your PC and an FTP site using the WS_FTP Synchronize Utility. This is especially useful for quickly and efficiently updating Web sites.
- Integrate WS_FTP Pro with your browser for faster downloading of files from the Web
- Use the WS_FTP Pro Development Kit (available separately) to write custom file transfer applications to automate uploads or downloads. See the Ipswitch Web site at <http://www.ipswitch.com> for more information.

System Requirements

WS_FTP Pro requires the following system resources:

- An Intel 386, 486, or Pentium processor
- Windows 95, 98, 2000, or NT
- A 32-bit TCP/IP protocol stack. Microsoft Windows 95, 98, 2000, and NT all come with their own 32-bit TCP/IP stacks.

Note for Users of Windows 3.1

If you are using Windows 3.1 or running a 16-bit TCP/IP protocol stack, you need to run a 16-bit version of WS_FTP Pro. To download it, visit the Ipswitch web site at www.ipswitch.com, click **Service & Support**, and then click **Current Product Versions**. From the list of products, select either the Registered or Evaluation version of **WS_FTP Pro (16-bit)**.

Installing WS_FTP Pro

The installation of WS_FTP Pro is the same for new users as it is for those who are upgrading from a previous version of WS_FTP Pro, or for those who are replacing an evaluation version with a purchased version.

Note

If you are upgrading from a previous version of WS_FTP Pro, or replacing an evaluation version, be sure to install the purchased version in the same location as your previous or evaluation version.

If you purchased WS_FTP Pro online, double-click the file you downloaded (*wsftppec.exe*) and follow the prompts on your screen.

To install WS_FTP Pro from a CD-ROM:

- 1 If you already have any versions of WS_FTP Pro on your system, make sure you are not running any of those versions (either Classic or Explorer).
- 2 Insert the WS_FTP Pro CD-ROM into a CD-ROM drive.

- 3 If the CD-ROM does not automatically display a “Welcome” screen, do one of the following:
 - If you are running Windows 95, 98, 2000, or NT 4.0 or later, click the **Start** button and select **Run**.
 - If you are running Windows NT 3.51, select **Run** from the **File** menu.
- 4 Enter the CD-ROM drive letter followed by `autorun`. For example, `d:autorun`.
- 5 Follow the instructions on your screen.

Please refer to the file named *whatsnew.txt* or *relnotes.txt* for information regarding enhancements or changes that may have been made to the software since this manual was printed.

Browser Integration (Classic Interface Only)

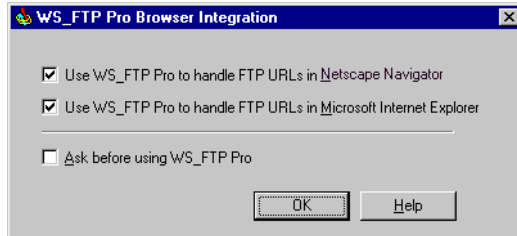
You can set up WS_FTP Pro Classic so that it automatically handles FTP URLs when you click them in your browser or in an e-mail message. (A URL, Uniform Resource Locator, is an Internet address describing an Internet resource. For example, the Web URL for the Ipswitch web site is `http://www.ipswitch.com/`; the FTP URL for the FTP site of WS_FTP Pro Patches is `ftp://ftp.ipswitch.com`.)

WS_FTP Pro handles FTP URLs as follows:

- If the URL is the name of an FTP server, such as `ftp.ipswitch.com`, WS_FTP Pro “handles” the URL by starting the Classic interface of WS_FTP Pro and connecting to the site.
- If the URL includes the path and name of a file, such as `ftp.ipswitch.com/French/ftp605F.txt`, WS_FTP attempts to download the file to your PC, and prompts you for a location to save or execute the file.
- If the URL includes the path and name of a folder (and not a file), such as `ftp.ipswitch.com/French`, WS_FTP Pro “handles” the URL by starting the Classic interface, connecting to the site, and navigating to the folder.

To turn on Browser Integration in the Classic interface:

- 1 If you are not already in the “Browser Integration” dialog box, select **Browser Integration** from the **Utilities** menu.



- 2 If you use Netscape Navigator and want WS_FTP Pro to handle FTP URLs, turn on the first check box.
- 3 If you use Microsoft Internet Explorer and want WS_FTP Pro to handle FTP URLs, turn on the second check box.
- 4 If you want to be prompted each time you click an FTP URL so you can choose whether or not to use WS_FTP Pro, turn on **Ask before using WS_FTP**.

Other Ipswitch WS_FTP Products

Ipswitch provides several products to meet your file transfer needs. WS_FTP Pro includes the WS_FTP Find Utility, the WS_FTP Scripting Utility, the WS_FTP Synchronize Utility, and the WS_FTP Queuing Utility.

You can purchase the WS_FTP Server and the WS_FTP Pro Development Kit separately.

WS_FTP Server

The WS_FTP Server is a full-featured FTP server for Windows NT systems. WS_FTP server lets you create an FTP site that makes files and folders on your PC available to other users. WS_FTP Server offers many features not found in most commercial servers today, including automatic resumption of interrupted transfers.

WS_FTP Pro Development Kit

You can develop custom applications using the WS_FTP Pro Development Kit. It lets you create programs to work with WS_FTP

Pro for transferring files to or from FTP sites or between FTP sites. The Development Kit lets you create an FTP application without being concerned with the intricacies of network programming.

Getting Updates and Giving Feedback

Ipswitch frequently makes patches and upgrades available on our Web site. For the latest version information, please visit www.ipswitch.com. (Product upgrades to extend capabilities are also available from the same locations, but you should note that most upgrades require a valid service agreement.)

To access upgrades on the Ipswitch FTP site:

- 1 In the WS_FTP Pro window, click the **Connect** button.
- 2 In the “Connection” dialog box, open the **Ipswitch** folder and select the site named **Ipswitch WS_FTP Pro Patches**.
- 3 Click **Connect**. WS_FTP Pro connects to the **WS_FTP Pro** folder.
- 4 Select the patch file; the last three digits of the file name indicate the version number. For example, *wsftp606.exe* is the patch file to update earlier versions to WS_FTP Pro 6.06. Read the accompanying text file (for example, *wsftp606.txt*) to verify that you have located the correct file.
- 5 Transfer the patch file and place it in a folder *other than* your *WS_FTP Pro* folder or your *Temp* folder. To update the software, double-click the patch file and follow the instructions.

To access patches on the Ipswitch Web site:

- 1 In your Web browser, go to: <http://www.ipswitch.com>
- 2 Click the **Service & Support** link at the top right of the Web page.
- 3 Click **Patches and Upgrades**, and then click the link for your platform type.
- 4 Save the patch file in a folder *other than* your *WS_FTP Pro* folder or your *Temp* folder.
- 5 Run the patch file to update the software.

We welcome your feedback on WS_FTP Pro. Please e-mail any comments and suggestions to feedback@ipswitch.com.

Uninstalling

The uninstall function removes all files associated with WS_FTP Pro from your PC, including your configured sites. It also removes the WS_FTP Pro Explorer icon from your desktop.

To uninstall WS_FTP Pro:

- 1 Click the **Start** button and select **Programs -> WS_FTP Pro Uninstall**.
- 2 When prompted, choose **Uninstall WS_FTP Pro**.
- 3 Follow the on-screen instructions to uninstall WS_FTP Pro.

Chapter 2: Getting Started

This chapter describes how to use WS_FTP Pro: both the Classic and the Explorer interfaces. All the procedures direct you to use pull-down menus. You should note, however, that you can often use buttons or the right mouse menu to accomplish the same tasks.

Starting WS_FTP Pro

To start WS_FTP Pro, do one of the following:

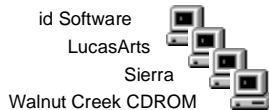


- In Windows 95, 98, 2000, and NT 4 or later, click the **Start** button and select **Programs** → **WS_FTP Pro** → **WS_FTP Pro** or **WS_FTP Pro Explorer**.
 - Double-click the **WS_FTP Pro** or **WS_FTP Pro Explorer** icon wherever you installed it.
-

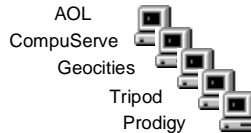
Preconfigured FTP Sites

WS_FTP Pro comes with a number of preconfigured popular FTP sites organized in folders. You can use these configured sites right “out of the box” to log on to these sites anonymously. For example, you can select the site named *LucasArts* in the *Games* folder to access an FTP site that contains various computer games you can download for free.

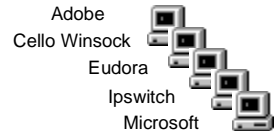
FTP SITES OFFERING GAMES:



FTP SITES OFFERING ONLINE SERVICES:



FTP SITES OFFERING SOFTWARE:



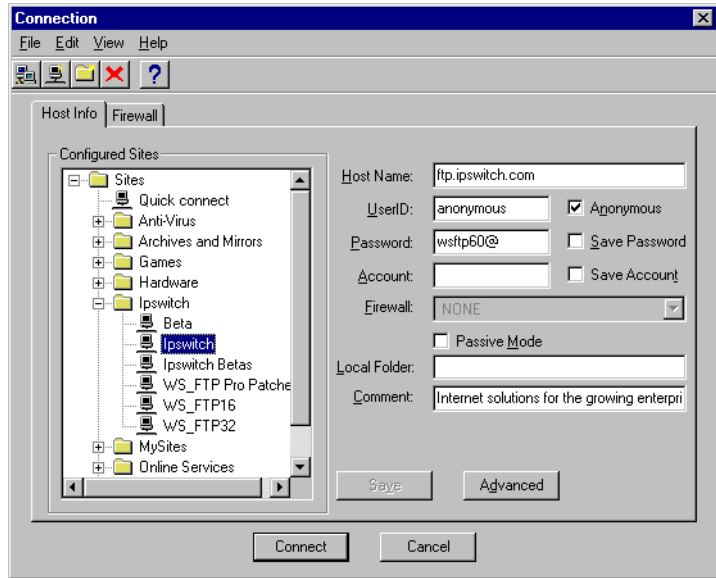
You can also configure sites of your own and add them to the list of sites; this is covered in “Configuring a New FTP Site” on page 17.

The “Connection” Dialog Box (Classic Interface Only)

By default, WS_FTP Pro Classic starts with the “Connection” dialog box. If you are not already viewing the “Connection” dialog box, select **Connect** from the **File** menu.

The FTP sites you have configured are listed under **Configured Sites**, along with some pre-configured sites that come with WS_FTP Pro.

A configured site is a saved collection of information about an FTP site.



The list of **Configured Sites** represents all the saved site configurations (including the preconfigured sites described above). Each site configuration includes information such as the name of the site, how you’ll log on, and what you see when you first connect.

The “Connection” dialog box offers a number of options.

- To connect to an existing (configured) FTP site, double-click the site in the **Configured Sites** list; or select a site, enter your password, and click **Connect**.
- To edit a site’s host information, select the site in the **Configured Sites** list and edit the information on the right. For more information, see “Entering Other Host Information” on page 19.
- To edit advanced site properties, select the site and click the **Advanced Properties** button. For more information, see “Site Configuration Settings” on page 23.

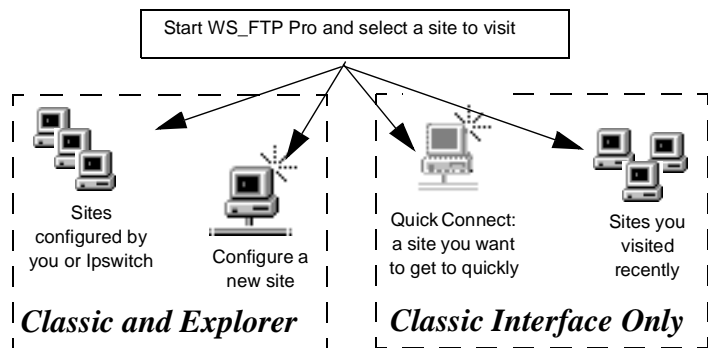
- To delete a site, select the site and select **Delete** from the **Edit** menu.
- To rename a site, select the site and select **Rename** from the **Edit** menu.
- To create a new FTP site (or a new site folder), select **New Site** (or **New Folder**) from the **File** menu. For more information, see “Configuring a New FTP Site” on page 17.
- To connect to an unlisted FTP site with minimal effort and time, select the site icon named **Quick Connect**. For more information, see “Quick Connect (Classic Interface Only)” on page 20.

Selecting an FTP Site and Connecting

To connect to an FTP site, you first *select* the FTP site. In both the Classic and Explorer interfaces, you can select a site from those that have been configured by you or Ipswitch, or you can configure a new site.

In the Classic interface, you can also select a site in two other ways:

- **Quick Connect** to a site using minimal connection parameters
- Select a site you visited recently from the **File** menu



Note

You can also specify and connect to a site using the Command Line. For more information, see “Chapter 12: Using the Command Line” on page 111.

Selecting a Configured Site

You can easily connect to a site that has already been configured by you or by Ipswitch.

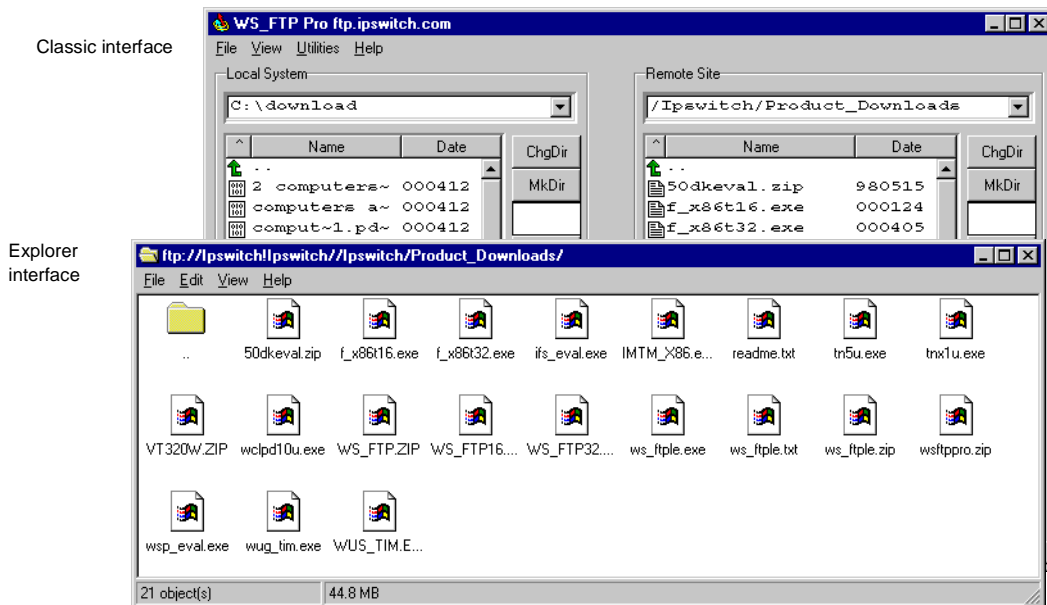
In the Classic Interface:

- 1 If you are connected to a site, disconnect from it.
- 2 Select **Connect** from the **File** menu to view the “Connection” dialog box.
- 3 Select the desired site in the list of **Configured Sites** and click **Connect**.

In the Explorer Interface:

- Double-click the site icon.

WS_FTP Pro connects you to the FTP site and displays the folder determined by the **User ID** in the site configuration. For example, the site configuration named **Ipswitch** that ships with WS_FTP Pro uses *Anonymous* as the user ID. Therefore, when you connect to this site, you see the **Product_Downloads** folder that the Ipswitch site displays to anonymous logins.



Configuring a New FTP Site

If you want to connect to a site that you intend to revisit, you'll want to save the information you enter about the site. Connecting to a site and saving the site information is called "configuring" a new site.

In the Classic interface:

- 1 If you're connected to an FTP site, select **Close** from the **File** menu.
- 2 Click the **Connect** button to view the "Connection" dialog box.
- 3 Select **New Site** from the **File** menu and enter a site name and host name/IP address as described in the guidelines below.
- 4 Click **Finish**. The new site appears in the **Configured Sites** list.

In the Explorer interface:

- 1 Select **New...** from the **File** menu.
- 2 In the "New Site/Folder" dialog box, make sure **FTP Site** is selected. Use the guidelines below to enter a name for the site, then click **Next**.
- 3 In the "Host Name" dialog box, use the guidelines below to enter a **Host Name or IP Address**; then click **Next**.
- 4 In the "Logon Information" dialog box, use the guidelines below to enter a **User ID** and **Password**.
- 5 Click **Finish**. You now see the properties for the new site.
- 6 Use the guidelines below to enter the **Account**.

Guidelines for Entering Site Name

The **Site Name** is a name you assign to an FTP site for your own convenience: you will select this name from the list of **Configured Sites** shown on page 14. Do not make it longer than 78 characters, or it will be truncated.

Note

Do not enter an underscore as the first character in the site name, and do not use an exclamation point or brackets *anywhere* in the site name.

Note

You can use two different site configurations (with different names) for the same FTP site, for example, if you want to log onto the same site using different user IDs.

Once you configure an FTP site, you can go back and change the site name by selecting the site name and then selecting **Rename** from the **File** menu.

Guidelines for Entering the FTP Site's Host Name or IP Address

Every system on the Internet has an official host name and IP address. In order to connect to an FTP site, you must find out the official name or address of the site.

To get the name or address of a popular FTP site, you can use a search engine such as Lycos.com or Yahoo.com to search for the name. Or, try replacing the “www” portion of the organization's URL with “ftp”, for example replace *www.ipswitch.com* with *ftp.ipswitch.com*. Or simply call the company and ask for the name of their FTP site.

If you want to connect to an FTP site maintained by your Internet Service Provider (ISP), your ISP will provide you with an FTP name or address that looks something like: *ftp.cecil.com* or 156.21.50.1.

Guidelines for Entering User ID, Password, and Account

To log on to an FTP site, you must identify yourself with a **User ID** and **Password**. For sites that allow anonymous logins, you can use the word *anonymous* as a user ID and an e-mail address as a password. To test this, try connecting to the Ipswitch FTP site (*ftp.ipswitch.com*) using the user ID *Anonymous*.

However, FTP sites that are not open to the general public, or that allow you to upload files, usually require users to identify themselves with a unique user ID, password, and (sometimes) an account number or name. FTP sites such as these are used for exchanging confidential files within an organization, posting of personal Web pages, or storing photographs for ads in online auctions.

Enter the **User ID**, **Password**, and **Account** as follows:

- 1 Get the user ID, password, and account name or number (if applicable) from the FTP site administrator, your ISP, a co-worker, or other authorized source of information about the FTP site.
- 2 In WS_FTP Pro, display the host information for the FTP site, and do one of the following:
 - Select **Anonymous** (recommended for most FTP sites unless you have special permissions or an account). This enters *anonymous* as your **User ID** and your default e-mail address as the **Password**. See also “Notes About Passwords” on page 22.
 - If you have special permissions on the FTP site, enter the **User ID** and **Password** provided to you by the FTP Site administrator to access the site. See also “Notes About Passwords” on page 22.
- 3 If applicable, enter the **Account** that you want to use for the User ID you entered. In most cases, you will leave the **Account** blank because most FTP sites do not use accounts. Select **Save Account** if you do not want to enter the account each time you log on to this site.

Entering Other Host Information

When you configure a new site, WS_FTP Pro assigns commonly-used default settings for the host information. You can try to connect using these default settings, or you can change them.

- **Account.** If applicable, enter the account to use. For more information, see “Guidelines for Entering User ID, Password, and Account” on page 18.
- **Firewall.** If you have configured a firewall, select the firewall configuration from the list. For more information, see “Chapter 6: Using Firewalls” on page 81.
- **Passive Mode.** Select this option if you want your PC to establish the data connection to the FTP site instead of the site establishing the data connection to your PC. For more information, see “Doing Passive Transfers” on page 49.

- **Local Folder.** If there is a folder on your PC that you want to use as your starting location when you connect to this FTP site, enter the path of the folder here. For more information, see “Changing the Startup Folder on Your PC” on page 36.
- **Comment.** Enter any comments you want to include with this site as described in “Commenting on an FTP Site” on page 25.

When you have finished entering host information, click **Save** or **OK**.

Additional settings for FTP sites are described in “Site Configuration Settings” on page 23.

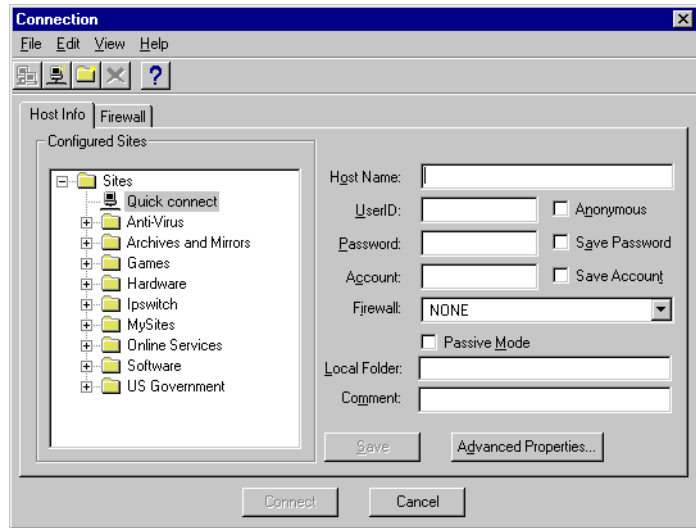
To change the location of the new site, drag the new site into an existing folder or create a new folder for the site.

Quick Connect (Classic Interface Only)

In the WS_FTP Pro Classic interface, the “Quick Connect” option provides a means for you to connect to an FTP site with minimal effort and time; for example, you might use Quick Connect to connect to a site that you want to visit just once.

- 1 To Quick Connect, you must be in the “Connection” dialog box. If you are there, highlight the Quick Connect icon at the top of the **Configured Sites** list and go to the next step. If you are *not* in the “Connection” dialog box, do one of the following:
 - If you are connected to a site, select **Close** from the **File** menu, and then select **Quick Connect** from the **File** menu.
 - If you are not connected to a site, but are in the Classic main window, select **Quick Connect** from the **File** menu.

You see the “Connection” dialog box with the **Quick Connect** icon selected in the list of **Configured Sites**; the host information on the right side of the dialog box is blank.



- 2 Enter a **Host Name** or IP address as described in “Guidelines for Entering the FTP Site’s Host Name or IP Address” on page 18.
- 3 Enter the **User ID** and **Password** as described in “Guidelines for Entering User ID, Password, and Account” on page 18.
- 4 (Optional) To save the information you have entered as a configured site (so you can easily re-connect), click **Save**.
- 5 Click **Connect**.

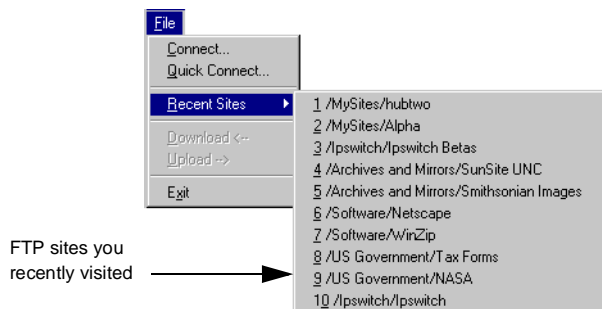
There are many other parameters that can be entered or set for an FTP site. When you enter minimal information using Quick Connect, WS_FTP Pro fills in these parameters with commonly-used default values. However, you can set these as needed.

All options for these parameters are covered by the topics under “Entering Other Host Information” on page 19 and “Site Configuration Settings” on page 23.

Selecting a Site You Visited Recently (Classic Interface Only)

In the Classic interface, the FTP sites you visited most recently are listed on the **File** menu. To re-connect to one of those sites, do one of the following:

- If you are in the “Connection” dialog box, select the site from the end of the **File** menu.
- If you are in the main window, select a site from the **File** menu **Recent Sites** hierarchical menu.



Notes About Passwords

If you are logging on anonymously (using an e-mail address as a password):

- You can use a valid e-mail address if you do not mind the FTP site learning your e-mail address.
- You can place a minus (-) sign in front of the e-mail address in order to minimize the number of descriptive messages you will receive from the FTP site administrator.
- WS_FTP Pro does not allow you to enter a blank password; however, you can enter empty quotation marks if you would rather not divulge a valid e-mail address.

If you are not logging on anonymously:

- We do not recommend turning on **Save Password** unless you are the only user of your computer and no one else has access to your WS_FTP folder. If you do not save the password, WS_FTP Pro will prompt you for one when you initiate the connection.

See also “Setting a Default E-mail Address for Anonymous Logins” on page 25.

Site Configuration Settings

Whether you save a site configuration or not, you can set a number of parameters that determine how you will connect to the site.

Setting the Remote Port

The remote port is the port on which WS_FTP Pro will try to connect to the FTP site. This is normally 21; however, it may be something different if you are going through a firewall, or if the FTP site administrator has assigned the FTP protocol to another port.

- 1 Do one of the following:
 - *In the Classic interface*, select **Connect** from the **File** menu to view the “Connection” dialog box. Then select the site, and click **Advanced Properties**.
 - *In the Explorer interface*, select a site, select **Site Properties** from the **File** menu.
- 2 Click the **Advanced** tab.
- 3 Enter the **Remote Port** number.

Retrying the Connection

If the initial connection attempt fails, the FTP site may be busy. WS_FTP Pro can try again to make a connection.

- 1 Do one of the following:
 - *In the Classic interface*, select **Connect** from the **File** menu to view the “Connection” dialog box. Then, select the site, and click **Advanced Properties**.
 - *In the Explorer interface*, select a site, select **Site Properties** from the **File** menu.
- 2 Click the **Advanced** tab.
- 3 In the **Connection Retry** box, enter the number of times to try again.

Sending a Command to an FTP Site

You can issue a command to this FTP site whenever you connect to it. For example, on a UNIX site, the command SITE UMASK 022 changes the UMASK used when creating files. Use a semicolon to separate multiple commands, but not more than 250 characters total.

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site, and click the **Advanced Properties** button.
 - *In the Explorer interface*, select a site, and select **Site Properties** from the **File** menu.
- 2 Click the **Startup** tab.
- 3 In the **Initialize Command** text box, enter any commands you want to issue to the FTP site at the beginning of the session.

Changing the Host Type

The host type is usually the manufacturer and version of the FTP server software. For a list of host types supported by WS_FTP Pro, go to the **KnowledgeBase** on the Ipswitch web site (www.ipswitch.com) and search for “host type.”

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site, and then click the **Advanced Properties** button.
 - *In the Explorer interface*, select a site, and select **Site Properties** from the **File** menu.
- 2 Click the **Advanced** tab.
- 3 Edit the **Host Type**.
 - If you know the host type, select it from the drop down list.
 - If you do not know the host type, WS_FTP Pro can probably detect it for you: try “automatic detect.”
 - If you would like to figure out the host type, see “Problem: File List Missing, Blank, or Unreadable” on page 143.

Commenting on an FTP Site

You can store a comment about the site for your future reference.

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site so that the host information is displayed on the right.
 - *In the Explorer interface*, select a site, select **Site Properties** from the **File** menu, and click the **Host Info** tab.
- 2 Enter a **Comment** about the site.



Setting a Default E-mail Address for Anonymous Logins

Most FTP sites support anonymous logins which allow the general public to log onto the site and download files. However, even FTP sites that allow anonymous logins still require a user ID and password; for most anonymous logins, the user ID is the word *anonymous* and the password is an e-mail address.

- 1 Do one of the following:
 - *In the Classic interface*, if you are in the “Connection” dialog box, close it. Then, select **Options** from the **View** menu, and click the **General** tab.



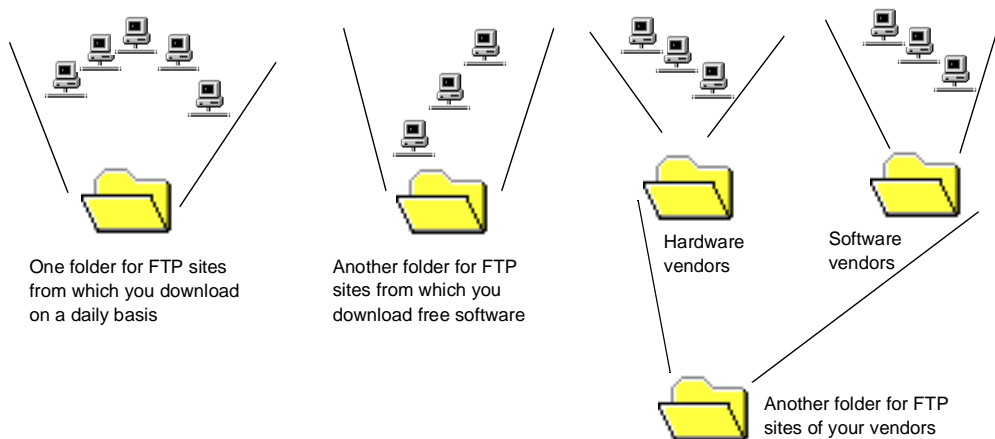
- *In the Explorer interface*, select **WS_FTP Pro Explorer Properties** from the **File** menu, and click the **Preferences** tab.



- 2 In the **E-mail Address** box, enter the e-mail address you want to use when you log onto an FTP site anonymously. See also “Notes About Passwords” on page 22.

Organizing Sites in Folders

You can organize your configured sites in hierarchical folders. For example, you might have one folder for FTP sites that offer games, and another folder for FTP sites from which you download software updates.



Do one of the following:

In the Classic interface,

- If you are connected to a site, select **Close** from the **File** menu.
- Select **Connect** from the **File** menu to view the “Connection” dialog box.
- Drag sites and folders around in the dialog box using standard Windows techniques.

In the Explorer interface, drag (or Copy and Paste) sites and folders in the dialog box using standard Windows techniques.

Creating a New Folder

You can create folders as needed to organize and store your configured FTP sites.

In the Classic interface:

- 1 If you are connected to a site, select **Close** from the **File** menu.
- 2 Select **Connect** from the **File** menu to view the “Connection” dialog box.
- 3 Select **New Folder** from the **File** menu.
- 4 Enter a name for the folder. Do not enter an underscore as the first character in the folder name; and do not use an exclamation point or brackets *anywhere* in the folder name.
- 5 Click **Finish**.

In the Explorer interface, create a new folder using standard Windows techniques. Do not enter an underscore as the first character in the folder name; and do not use an exclamation point or brackets *anywhere* in the folder name.

Disconnecting from an FTP Site

In the Classic interface, select **Close** from the **File** menu.

In the Explorer interface, do one of the following:

- To disconnect from a particular site, select the site and choose **Disconnect** from the right-mouse menu.
- To disconnect from all sites, choose **Disconnect All** from the **File** menu.

Deleting a Configured FTP Site

In the Classic interface, delete a configured site as follows:

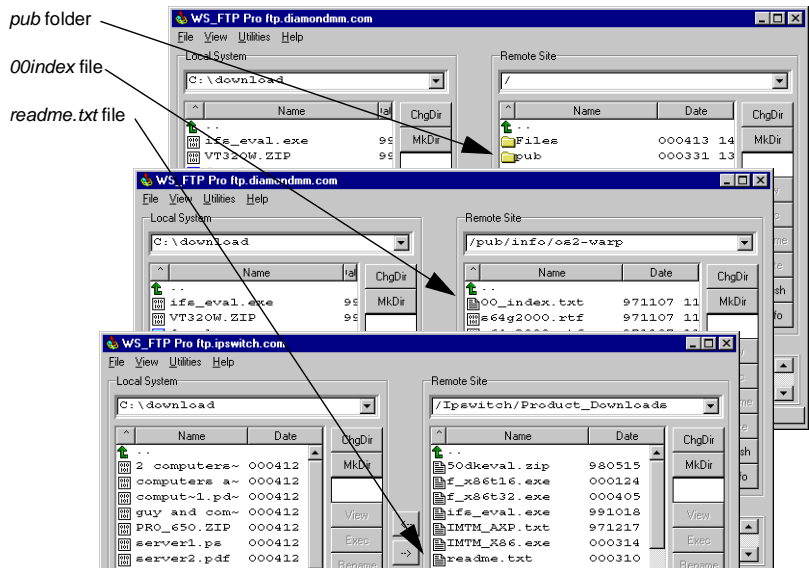
- 1 If you are currently connected to a site, select **Close** from the **File** menu.
- 2 Select **Connect** from the **File** menu to view the “Connection” dialog box.
- 3 Select the site.
- 4 Select **Delete** from the **Edit** menu.

In the Explorer interface, delete a configured site as follows:

- Select the site icon and select **Delete** from the right-mouse menu.

Chapter 3: Viewing and Navigating Files and Folders

If you are having trouble locating the files you want to download on an FTP site, you can look for information that is often provided by the site administrator. For example, files named *readme*, *readme.txt*, *index*, or *00index* often offer a description of the available files, as well as other site information. Any folder named *pub* usually contains popular files.



WS_FTP Pro provides many tools and techniques for viewing and navigating files and folders; this chapter includes the following topics:

- Finding Files and Folders
- Viewing Listings of Files and Folders
- Displaying Directory Information
- Sorting Files and Folders
- Limiting the Display of Files Using a Mask
- Changing the Current Drive or Folder
- Creating a Folder on an FTP Site
- Setting the Startup Folder on an FTP Site or on Your PC

Finding Files and Folders

If either your PC or the FTP site contains a large number of folders and files, try one of these methods for locating the file you want:

- Use the **File Mask** text box as described in “Limiting the Display of Files Using a Mask” on page 32.
- Use the WS_FTP Find Utility to locate a file on a large, complex FTP site. For more information, see “Chapter 8: The Find Utility” on page 91.

Viewing Listings of Files and Folders

Arrange listings of site and folder icons so they are helpful to you.

In the Classic interface:

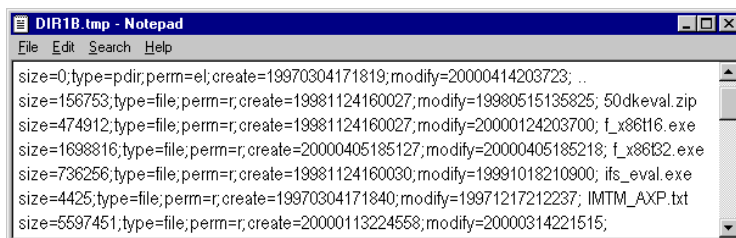
- 1 If you are in the “Connection” dialog box, close it.
- 2 Select **Options** from the **View** menu.
- 3 Use the **Display** tab to change the screen layout, fonts, and date formats. Use the **Sort** tab to view a different sequence.

In the Explorer interface:

- Use standard Windows techniques and tools (such as the **View** menu).

Displaying Directory Information (Classic Interface Only)

You can display directory information in the Classic interface. While connected to an FTP site, click the **DirInfo** button.



Information about the current directory is displayed as a text document in the default text viewer. (To see what the default text viewer is, select **Options** from the **View** menu and click the **General** tab.) You can print the document or save it.

Depending on how much information is reported by the FTP site, for each file or folder within the current directory, the following information may be shown: size, type, permissions, creation date, date last modified, and name.

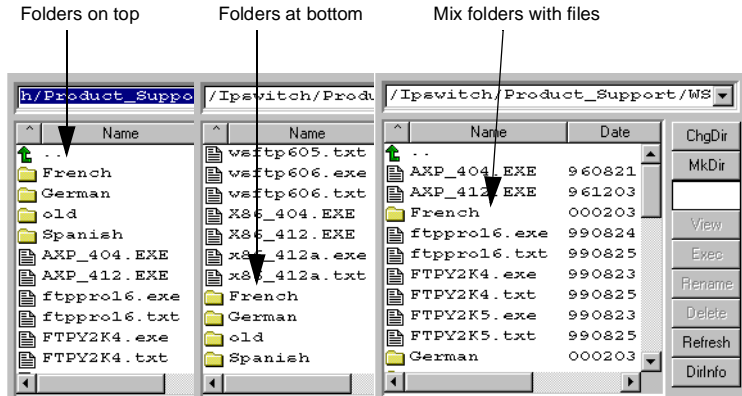
Sorting Files and Folders

Sort the files and folders on your PC or on an FTP site in the way that is most helpful to you in locating what you want.

In the Classic interface, you can sort in the following ways:

- You can sort the files and folders in the **Local System** or **Remote Site** list boxes by using the column headings (**Name**, **Date**, **Size**) above each list. Click a column heading to sort the files and folders as follows:
 - **Name**. Click the column heading, **Name**, to toggle the alphabetical list between ascending and descending order. Click **Ctrl + Name** to sort the file names by file extension.
 - **Date**. Click the column heading, **Date**, to toggle the alphabetical list between ascending and descending order.
 - **Size**. Click the column heading, **Size**, to toggle the alphabetical listings between ascending and descending order.
 - **^** Click the button to the left of the column heading, **Name**, to rotate the sorting of folders from (a) the top of the list, to (b) the bottom of the list, to (c) mixed with files.
- Use the **Sort** command on the right-mouse menu.
 - Place the cursor over the list box you want to sort.
 - Select **Sort** from the right-mouse menu. The “Sort” dialog box appears.

- Select the desired options and click **OK**.



- Select **Options** from the **View** menu and click the **Sort** tab; it provides the same options as the **Sort** command.

In the Explorer interface,

- Use standard Windows techniques to sort files and folders.

Limiting the Display of Files Using a Mask

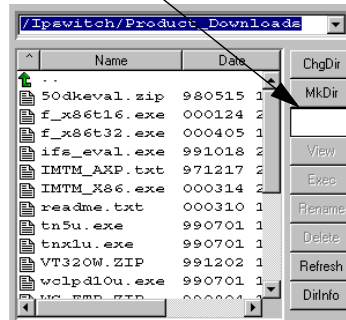
If the current folder on your PC or the FTP site contains a large number of files, and you always look for files of a particular type on that site, you can limit the files displayed to just one type by setting a filter for a particular site.

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site and click **Advanced Properties**.
 - *In the Explorer interface*, select the site and select **Site Properties** from the **File** menu.
- 2 Click the **Startup** tab.
- 3 To limit the displayed files, enter characters in the **Local file mask** and/or **Remote file mask** text box. Examples: To display only text files, enter *.txt. To display only files whose names begin with the letter A, enter a*. If you are connected to a UNIX FTP site, you can use -a1 or -la to view hidden (.) files.

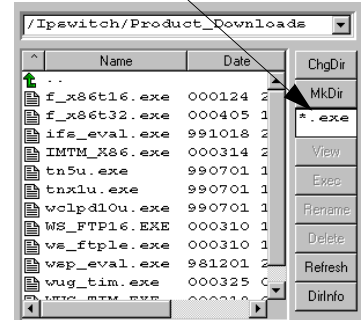
In the Classic interface, you can set the file mask “on the fly” – that is just for the duration of the current connection. Do the following *while* you are connected to a site:

- 1 Enter a filter in the **Local file mask** and **Remote file mask** text boxes. For example, if you enter *.exe, only files with the .exe extension are displayed.
- 2 Press **Enter**.

No file mask



File mask is *.exe



Changing the Current Drive

You may want to change to another drive on your PC (the “Local System”) -- *not on an FTP site*.

In the Classic interface, do one of the following:

- Type the drive letter, followed by a colon, into the current folder box under the words “Local System;” for example, d:

Type the drive letter here



- Scroll the list box and double-click the appropriate drive.
- With nothing selected, click the **ChgDir** button. When you are prompted for a folder to change to, enter the drive letter followed by a semicolon (for example, d:), and then click the **OK** button.

In the Explorer interface,

- Use standard windows techniques to change drives.

Changing the Current Folder

In the Classic interface, do one of the following:

- If the desired folder name is shown in the list box, double-click it.
- Select the desired folder and click the **ChgDir** button. WS_FTP Pro changes the current folder to the one selected.
- To get a prompt where you can enter the desired folder name, make sure nothing is selected in the list box and click the **ChgDir** button.
- Edit the folder path in the current folder box (just under the words **Local System** or **Remote Site**).

Enter or edit the folder path here.



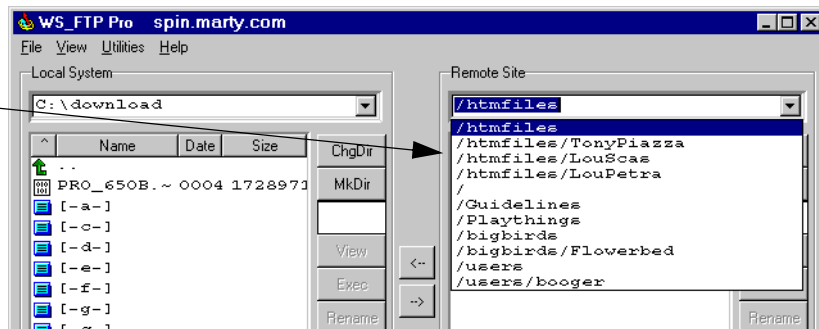
In the Explorer interface,

- Use standard windows techniques to change folders.

Remembering Folders (Classic Interface Only)

To show the folders you have visited in the folder drop-down lists, turn on **Remember Folders**: select **Options** from the **View** menu and click the **Session** tab. The folders you visit are added to the lists when you disconnect from the site using the **Close** command or button.

The folders you have visited are stored on this drop-down list.



When you turn *on* this option and click **Set as Default**, the option is set as the default for all sites; that is, it becomes the setting for all site

configurations unless it is overridden by the settings for particular sites and folders.

Creating a Folder on an FTP Site

Not all FTP sites allow you to create and remove folders; you must have permission from the FTP site administrator. If you do have the appropriate permission, use the following procedures.

In the Classic interface:

- 1 Place the cursor in the FTP site file list.
- 2 Select **Make Folder** from the right-mouse menu (or click the **MkDir** button). You are prompted for a folder name and must supply a name that is valid for the current FTP site.

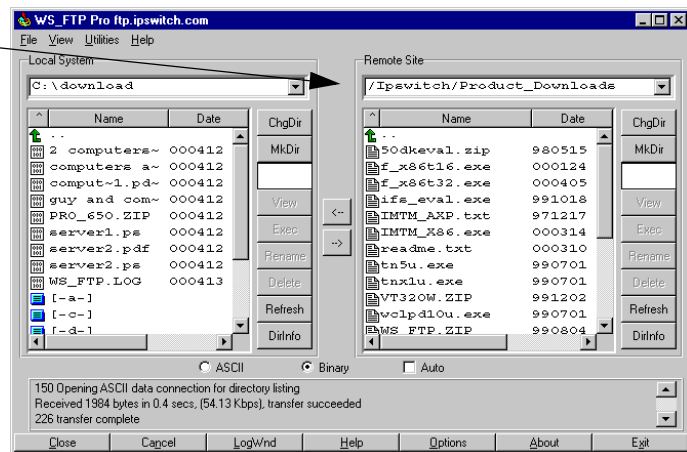
In the Explorer interface,

- Use standard Windows techniques (such as selecting **New Folder** from the **File** menu).

Setting the Startup Folder on an FTP Site

You can set the folder that is current when you first connect to an FTP site. For example, the site configuration for the Ipswitch FTP site that ships with WS_FTP Pro makes the *Product_Downloads* folder the place you start when you connect to this site

Product_Downloads
folder on the Ipswitch
FTP site



- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site and click **Advanced Properties**.
 - *In the Explorer interface*, select the site, and select **Site Properties** from the **File** menu.
- 2 Click the **Startup** tab.
- 3 In the **Remote Site Folder** text box, specify the folder you want to view whenever you first connect to this FTP site.

Changing the Startup Folder on Your PC

You can set the folder on your PC that is current when you first connect to an FTP site.

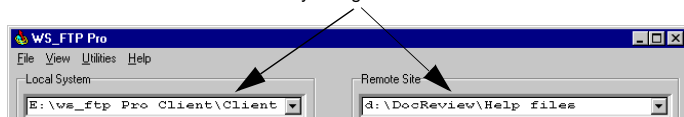
- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site to view the host information.
 - *In the Explorer interface*, select the site, select **Site Properties** from the **File** menu, and click the **Startup** tab.
- 2 In the **Local Folder** text box, enter the path and folder name of the folder you want to start with when you connect to this site.

Setting the Startup Folders While You Are Logged On (Classic Interface Only)

In the WS_FTP Pro Classic interface, you can set the default local and remote folders for a particular site *while you are logged on*.

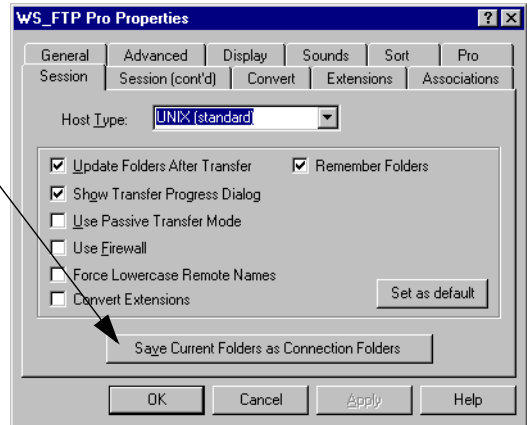
- 1 If you are not connected to the site, connect to it.
- 2 Navigate to the desired startup folders on your PC and on the site.

Suppose you want to make these the startup folders each time you log onto this site.



- 3 Select **Options** from the **View** menu.
- 4 Click the **Session** tab.
- 5 Click the button labeled **Save Current Folders as Connection Folders**.

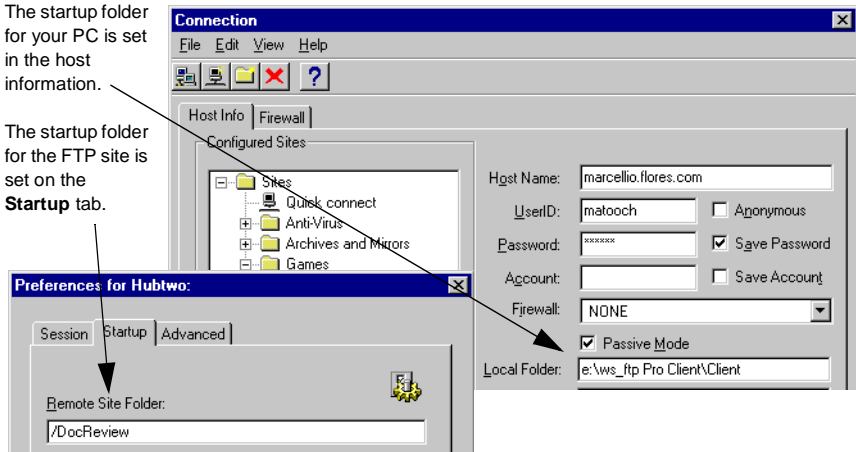
The current local and remote folders are saved in the site properties when you click this button.



The current folders are set in the site properties.

The startup folder for your PC is set in the host information.

The startup folder for the FTP site is set on the **Startup** tab.



Chapter 4: Transferring Files

This chapter includes the following topics:

- Dragging and Dropping
- Moving Files
- Appending Files
- Viewing, Editing, and Executing a File
- Working with Transfer Modes
- Doing Passive Transfers
- Restarting Interrupted Transfers
- Setting Network Timeout and Buffers
- Transferring a Hidden File
- Monitoring the Progress of Transfers
- Confirming Overwrites
- Using Sound to Indicate Success or Failure
- Viewing the Protocol Conversation and the Log

Dragging and Dropping

You can transfer files or folders by dragging and dropping.

In the Classic interface:

- You must first *enable* dragging and dropping in order to transfer files and folders by dragging them from the **Local System** pane to the **Remote Site** pane, or vice versa.
- To enable the drag and drop feature in the Classic interface, do the following: If you are in the “Connection” dialog box, close it. Then, select **Options** from the **View** menu and click the **Pro** tab. Turn on **Enable drag and drop between windows**.
- Once drag and drop is enabled, you can:
 - Drag files from the **Local System** pane to the **Remote Site** pane or vice versa.
 - Drag files from your Desktop or from any window on your local system to the FTP pane (“Remote Site”) of the WS_FTP Pro main window, and vice versa.

- Drag and drop with the right mouse button to get menu choices.

In the Explorer interface:

- You can always drag and drop a file if you arrange the windows on your desktop so you can see both the source and destination locations.
- Drag files from your Desktop or from any window on your local system to the FTP pane (“Remote Site”) of the WS_FTP Pro main window, and vice versa.
- You can drag and drop with the right mouse button to get menu choices.
- You can use the Shift key and right-mouse button when you drag to move the file.

Moving Files

To move a file means to copy it from one location to another location and *delete it from the source location*.

In the Classic interface,

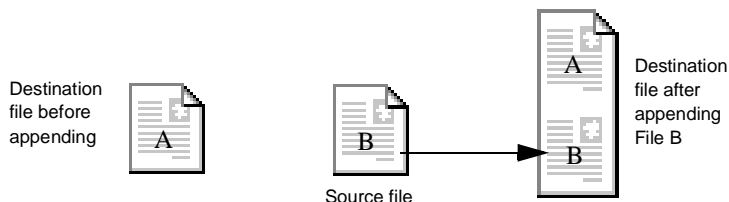
- You can move files from one location on an FTP site to another location *on the same site* if you have the appropriate permissions from the site administrator.
- To move a file, select the file and then select **Move files** from the right-mouse menu. You are prompted for the destination folder. (The destination folder must be on the same FTP site.)

In the Explorer interface,

- You can move files *only* if the moving of files is *enabled*. (To enable moving, select **WS_FTP Pro Explorer Properties** from the **File** menu so that the **Preferences** tab is displayed. Then, turn on **Allow Files and Directories to be Moved**.)
- Once the moving of files is enabled, you can move files from one location to another on a single FTP site, and you can move files from your PC to an FTP site, and vice versa.
- To move a file, select the file. Then, press and hold down the Shift key while you right-drag the selected file to the destination location.

Appending Files (Classic Interface Only)

You can select one or more files on the source system and append them to a destination file.



- 1 Select one or more files on your PC or the FTP site.
- 2 Select **Append files** from the right-mouse menu. A dialog box prompts you to enter the destination file name.
- 3 Enter the name of the file to which you want to append the selected file(s), and then click **OK**. The selected source files are copied to the end of the destination file.

Viewing a File

The procedure for viewing a file differs slightly depending on whether you are working in the Classic or Explorer interface.

In the Classic interface:

- 1 Select the file.

Note

If the file is on an FTP site, WS_FTP Pro will first create a temporary file by making a copy of the selected file in the *Temp* folder on your PC.

- 2 Select **View file** from the right mouse menu.
 - If the file is a text file, the temporary file in the *Temp* directory is opened in the text viewer. (You can set the default text viewer on the **General** tab of program options.)

- If the file is a data file, the temporary file in the *Temp* directory is opened in its associated application.
 - If **Remote Edit uses Shell Execute** is turned *on* (**General** tab of program options), the file is opened in the application that Windows associates with the file extension.
 - If **Remote Edit Uses Shell Execute** is turned *off* (**General** tab of program options), the file is opened in the application indicated on the **Associations** tab (if any); otherwise, the Windows file association is used.
- If the file is an application (a binary file) or does not have an application associated with it, the temporary file is opened in the text viewer; however, the results are unpredictable. (You set the text viewer on the **General** tab of program options.)

In the Explorer interface:

- 1 Select the file.

Note

If the file is on an FTP site, WS_FTP Pro will first create a temporary file by making a copy of the selected file in the *Temp* folder on your PC.

- 2 Do one of the following:
 - Select **Open** from the right-mouse menu to transfer the file to the temporary location using the default transfer mode and the same file name.
 - Select **Open...** (with ellipses) from the right-mouse menu to specify the transfer mode and/or rename the file.

The file is then opened for viewing as follows:

- If the file is a text file, it is opened in Windows Notepad.
- If the file is a data file, it is opened in the application that Windows associates with the file extension.
- If the file is an executable application, the application is started.

Editing a File

You can edit files on an FTP site only if the site administrator has given you permission to do so. The procedure for editing a file differs slightly depending on whether you are working in the Classic or Explorer interface.

In the Classic interface:

- 1 Select the file.

Note

If the file is on an FTP site, WS_FTP Pro will first create a temporary file by making a copy of the selected file in the *Temp* folder on your PC.

- 2 Select **Edit file** from the right-mouse menu.
 - If the file is a text file, the temporary file is opened in the text viewer. (You can set the default text viewer on the **General** tab of program options.)
 - If the file is a data file, the temporary file is opened in its associated application.
 - If **Remote Edit uses Shell Execute** is turn *on* (**General** tab of program options), the file is opened in the application that Windows associates with the file extension.
 - If **Remote Edit Uses Shell Execute** is turned *off* (**General** tab of program options), the file is opened in the application indicated on the **Associations** tab (if any); otherwise, the Windows file association is used.
 - If the file is an application (a binary file) or does not have an application associated with it, it is opened in Windows Notepad. Note, however, that the results are unpredictable.
- 3 Edit the file as desired. When you are finished editing, close the file and it will automatically be saved with its original file name in its original location. (*Again, note that this can happen only if you have permission to edit files on the current FTP site*).

In the Explorer interface:

- 1 Select the file.

Note

If the file is on an FTP site, WS_FTP Pro will first create a temporary file by making a copy of the selected file in the *Temp* folder on your PC.

- 2 Do one of the following:

- Select **Open** from the right-mouse menu to transfer the file to the temporary location using the default transfer mode and the same file name.
- Select **Open...** (with ellipses) from the right-mouse menu to specify the transfer mode and/or rename the file.

The file is then opened for editing; this depends on the type of file:

- If the file is a text file, it is opened in Windows Notepad.
- If the file is a data file, it is opened in the application that Windows associates with the file extension.
- If the file is an executable application, the application starts. (You can't really "edit" an executable file.)

- 3 Edit the file as desired.
- 4 Save the file back to its original location. (*Again, note that this can happen only if you have permission to edit files on the current FTP site*).

Executing a File

The procedure for executing a file differs slightly depending on whether you are working in the Classic or Explorer interface.

In the Classic interface:

- 1 Select the file.

Note

If the file is on an FTP site, WS_FTP Pro will first create a temporary file by making a copy of the selected file in the *Temp* folder on your PC.

- 2 Select **Execute file** from the right-mouse menu.
 - If the file is a text file or does not have an application associated with it, it is opened in the text viewer. (You set the text viewer on the **General** tab of program options.)
 - If the file is a data file, then the file is opened in its associated application.
 - If **Remote Edit uses Shell Execute** is turned *on* (**General** tab of program options), the file opens in the application that Windows associates with the file extension.
 - If **Remote Edit Uses Shell Execute** is turned *off* (**General** tab of program options), the file is opened in the application indicated on the **Associations** tab (if any); otherwise, the Windows file association is used.
 - If the file is an executable application, the application starts.

In the Explorer interface, you execute a file as follows:

- 1 Select the file.

Note

If the file is on an FTP site, WS_FTP Pro will first create a temporary file by making a copy of the selected file in the *Temp* folder on your PC.

- 2 Select **Open...** (with ellipses) from the right-mouse menu.
- 3 (Optional) Specify the transfer mode and/or rename the file.
- 4 Select **Open it**.

The way the file is opened depends on the type of file:

- If the file is a text file, it is opened in Windows Notepad.
- If the file is a data file, it is opened in the application that Windows associates with the file extension.
- If the file is an executable application, the application is started.

Working with Transfer Modes

Files can be transferred in ASCII, binary, or “Auto” mode (and in the Classic interface, L8 mode for VMS non-text file transferring).

A file that is text, HTML, postscript, other ASCII format (*.txt*, *.html*, *.htm*, *.cgi*), or EBCDIC should be transferred in ASCII mode. Note: Transferring a binary file in ASCII format can damage the file.

A file that is a bitmap, an executable, or compressed (*.bmp*, *.jpg*, *.exe*, *.zip*) should be transferred in binary mode. (Binary mode should also be used if there is no file extension or the file extension is not registered.)

If you turn on Auto mode, WS_FTP Pro checks to see if the file has an extension that is listed on the **Extensions** tab. If so, ASCII mode is used; if not, binary mode is used.

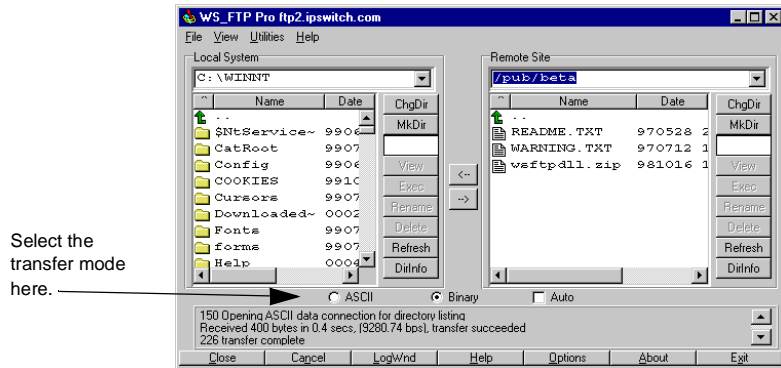
The “Startup Transfer Mode” is the transfer mode that is selected by default. For more information, see “Startup Transfer Mode” on page 47.

Selecting the Transfer Mode for a Particular Transfer

You can select the transfer mode for a particular transfer as follows:

In the Classic interface:

- 1 Select the file(s) you want to transfer.
- 2 Select the transfer mode at the bottom of the file listings in the main window.



- 3 Select **Upload** or **Download** from the **File** menu.

In the Explorer interface:

- 1 Select the file(s) you want to transfer.
- 2 Select **Open...** (with ellipses) from the right-mouse menu.
- 3 Select the transfer mode.

Startup Transfer Mode

The Startup Transfer Mode is the transfer mode that will be used unless you set it for a particular transfer as described above.

In both the Classic and Explorer interfaces, you can set the Startup Transfer Mode for an individual site or for all sites in a particular folder. In addition, in the Classic interface, you can also use the program options to set the Startup Transfer Mode as the default for all sites.

Note

The setting in the program options is overridden by the setting for the folder (if they differ); the setting for the folder is overridden by the setting for the individual site (if they differ).

To set the Startup Transfer Mode for a site or folder:

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site or the folder, and click the **Advanced Properties** button. You see the **Session** tab.
 - *In the Explorer interface*, select the site or folder, select **Site Properties** from the **File** menu, and click the **Session** tab.
- 2 Under **Startup Transfer Mode**, select one of the following:
 - ASCII**. Used for text file transferring.
 - Binary**. Binary mode is used for transferring files that are not text (e.g., executable programs, word processing documents, spreadsheets, databases, graphics files, and sound files).
 - L8**. (Classic interface only) Used for VMS non-text file transferring.
 - Auto Detect**. When selected, all files are transferred in binary mode unless the extension is listed on the **Extensions** tab. Extensions can be up to ten characters long and can contain periods. (These are not DOS extensions!) If you expect the extension to match on a period, you must enter the period.

In the Classic interface, you can also set the Startup Transfer Mode as the default for all sites:

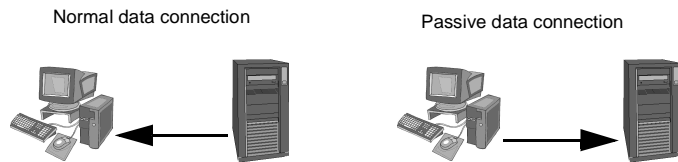
- 1 Select **Options** from the **View** menu.
- 2 Click the **Session (cont'd)** tab.
- 3 Set the **Startup Transfer Mode** as described above.
- 4 (Optional) Click **Set as Default**.

Note

When you turn *on* this option and click **Set as Default**, the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

Doing Passive Transfers

Normally, when you connect to an FTP site, the site establishes the data connection to your PC (the client). However, some sites allow passive transfers – where your PC establishes the data connection.



By default, passive mode is turned *on* in WS_FTP Pro; we recommend that you use it for most transfers from FTP sites that support passive transfers. Note, however, that passive mode may be *required* in the following instances:

- Local networks behind some types of router-based firewalls
- Networks behind a gateway requiring passive transfers
- Erratic transfers
- Repeated “failed data channel” errors

In both the Classic and Explorer interfaces, you can turn passive mode on or off for an individual site. In addition, in the Classic interface, you can also use the program options to make the passive mode setting the default for *all* sites.

Note

The setting in the program options is overridden by the setting for the individual site (if they differ).

To turn on passive transfers for a site:

- 1 Do one of the following:
 - ***In the Classic interface***, from the “Connection” dialog box, select the site so that its host information is shown.
 - In the Explorer interface, select a site and then select **Site Properties** from the **File** menu to view the **Host Info** tab.
- 2 Turn on **Passive Mode**.

In the Classic interface, you can also turn on passive transfers as the default setting for all sites:

- 1 Select **Options** from the **View** menu.
- 2 Click the **Session** tab.
- 3 Turn on **Use Passive Transfer Mode**.
- 4 (Optional) Click **Set as Default**.

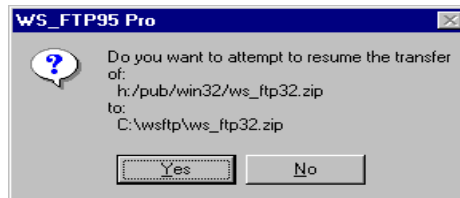
Note

When you turn *on* this option and click **Set as Default**, the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

Restarting Failed or Interrupted Transfers

Some FTP servers allow clients to restart transfers that have failed or been interrupted due to a lost connection, cancellation, or other reason. (However, many Microsoft FTP servers do not.)

When you reconnect, you are asked if you want to restart the transfer:



To take advantage of this option, you can turn on **Enable auto re-get of failed transfers**. Then, the next time you get a failed transfer, WS_FTP Pro will try to restart the transfer when you reconnect to the same FTP site.

Some important things to know about restarting transfers:

- The FTP site must support the restart feature in order for this to work.
- WS_FTP Pro does not automatically attempt to reconnect to the FTP site on its own.
- WS_FTP Pro restarts the transfer at the point where the transfer failed or was interrupted, if possible. Otherwise, it starts from the beginning.
- If you choose not to restart the transfer, you will be left with a partial file (from the interrupted transfer) in the destination folder. You should delete this file.
- WS_FTP Pro will *not* automatically resume a transfer that failed because the telephone connection was interrupted.

Enable the automatic restarting of interrupted transfers (*if* the FTP site allows this) as follows:

- 1 Do one of the following (*before* starting the transfer):
 - *In the Classic Interface*, select **Options** from the **View** menu, and click the **Pro** tab.
 - *In the Explorer interface*, select **WS_FTP Pro Explorer Properties** from the **File** menu. You see the **Preferences** tab.
 - 2 Turn on **Enable auto reget of failed transfers**.
-

Setting the Network Timeout

The **Network Timeout** determines the number of seconds that elapses before WS_FTP Pro stops waiting for an FTP site to respond; you can set this on a per site basis. Normally, the network timeout is determined by your Winsock DLL. You can set it to *less* time than your Winsock DLL, but setting it higher won't affect anything.

To set the network timeout:

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site and click the **Advanced Properties** button.
 - *In the Explorer interface*, select the site and select **Site Properties** from the **File** menu.
- 2 Click the **Advanced** tab.
- 3 Set the **Network Timeout**.

Note

In addition to the network timeout setting within WS_FTP Pro, there is also a *server* timeout that is determined by the FTP site. Most FTP sites will shut down the connection to a client such as WS_FTP Pro after a few minutes of inactivity. This setting can be changed only by the administrator of the FTP site, not from WS_FTP Pro.

Setting Network Buffer Sizes (Classic Interface Only)

The network buffers determine how big a chunk of data is processed each time your PC sends or receives data over the network. The **Receive size** is the buffer size for downloading a file from an FTP site; the **Transmission size** is the buffer size for uploading.

- 1 If you are in the “Connection” dialog box, close it.
- 2 Select **Options** from the **View** menu, and click the **Advanced** tab.
- 3 Set the Network Buffer **Receive size**. This controls the maximum number of bytes processed each time your PC reads from the network. The value can vary from 80 to 4096. You should see the best results with this set to 4096. Note that the actual number of bytes in each “Receive” is determined by the TCP/IP stack and by the amount of information available.
- 4 Set the Network Buffer **Transmission size**. This controls the maximum number of bytes processed each time your PC sends data over the network. The optimum value to place here depends on your TCP/IP stack. If you have a direct connection, 4096 is

best. If you have a SLIP or PPP connection, you probably want to set it to the MTU (Maximum Transfer Unit) size. For more information, go to the Ipswitch Web site, click **KnowledgeBase**, and search for “MTU.”

Transferring a Hidden File

You may sometimes need to transfer a hidden file.

In the Classic interface, you can transfer a hidden file if you know the name of the file.

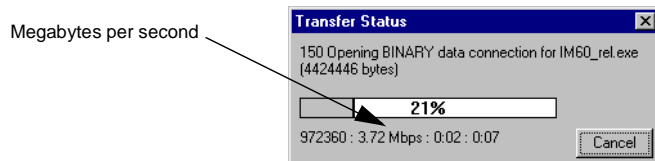
- 1 Connect to the FTP site and make sure no file or folder is selected.
- 2 Select **Upload** or **Download** from the **File** menu. WS_FTP Pro prompts you for the file name.

In the Explorer interface,

- 1 Select **Options** from the **View** menu. Click the **View** tab and select **Show all files**. You should now see the hidden file.
 - 2 Perform the transfer as you normally would.
-

Monitoring the Progress of Transfers

You can have WS_FTP Pro display a “Transfer Status” dialog box that shows the progress of an on-going transfer and shows a percent done bar (if the file size is sent by the FTP site).



In the dialog box, a progress “thermometer” is shown. Underneath it, you see four figures separated by colons with spaces on either side; for example:

3543040 : 2.97 KBps : 19:24 : 104:10

The numbers are bytes transferred, transfer rate in units per second, total time of transfer thus far, and time remaining in the transfer. In

the Classic interface, you can also control the units used in the dialog box for the transfer rate display; for more information, see “Setting the Transfer Rate Display (Classic Interface Only)” on page 55.

Note that “start” and “stop” bits (overhead) are also included in the computation; this adds about 10 bits for each byte transferred.

You can click the **Cancel** button in the “Transfer Status” box at any time to cancel the transfer. If you cancel a transfer, you will have a partial file in the transfer destination. You should delete the partial file.

You can turn on this option for:

- Transfers to and from a particular FTP site
- Transfers to and from all sites in a particular folder
- All transfers (unless overridden by site or folder settings)

To show transfer progress for a particular site, or all of sites in a particular folder:

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select a site or folder, and then click the **Advanced Properties** button.
 - *In the Explorer interface*, select the site and select **Site Properties** from the **File** menu.
- 2 Click the **Session** tab.
- 3 Turn on **Show Transfer Progress Dialog**.

To set the default for all uploads:

- 1 Do one of the following:
 - *In the Classic interface*, select **Options** from the **View** menu, and click the **Session** tab.
 - *In the Explorer interface*, select **WS_FTP Pro Explorer Properties** from the **File** menu to view the **Preferences** tab.
- 2 Turn on **Show Transfer Progress Dialog**.

Note

When you turn *on* this option (and click **Set as Default** in the Classic), the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

Setting the Transfer Rate Display (Classic Interface Only)

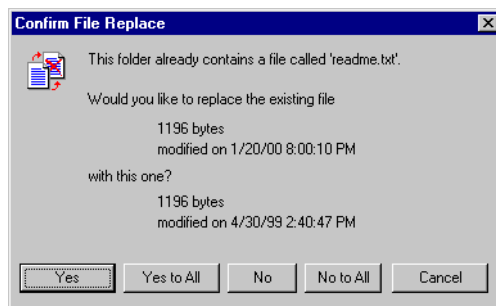
In the Classic interface, the transfer rate in the dialog box described above can be displayed in *bits per second* or in *bytes per second*.

To set the transfer rate display:

- 1 If you are in the “Connection” dialog box, close it.
 - 2 Select **Options** from the **View** menu.
 - 3 Click the **Advanced** tab.
 - 4 Under **Transfer Rate Display**, select **bits per sec** (kilobits or Kbps) or **Bytes per sec** (kilobytes or KBps).
-

Confirming Overwrites

Most sites allow you to overwrite (replace) a file without giving you a warning. However, you can have WS_FTP Pro display a confirmation dialog box when you are about to overwrite a file for which there is the same or a newer version (by date and time) in the destination folder.



Note

This feature does not work with some FTP sites.

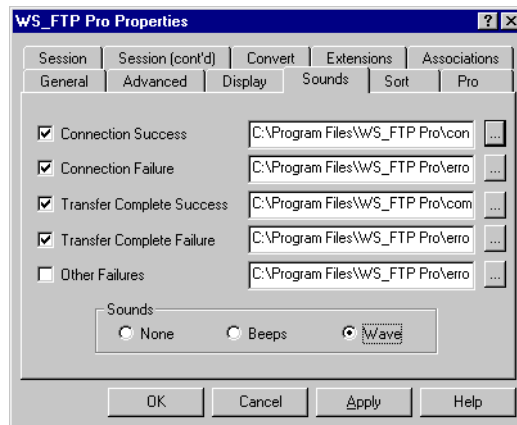
This option is set for all sites, not for individual sites. To set whether or not WS_FTP Pro confirms overwrites:

- 1 Do one of the following:
 - *In the Classic interface*, select **Options** from the **View** menu, and then click the **Pro** tab.
 - *In the Explorer interface*, select the site, select **WS_FTP Pro Explorer Properties** from the **File** menu to view the **Preferences** tab.
 - 2 Turn on **Prompt for overwrite of same or newer files**.
-

Using Sound to Indicate Success or Failure (Classic Interface Only)

In the Classic interface, you can use sound to signify success or failure: you can use the system beep, the .wav files supplied with WS_FTP Pro, or any other .wav files you like.

- 1 If you are not already viewing the **Sounds** tab, select **Options** from the **View** menu, and click the **Sounds** tab.



- 2 Under **Sounds**, select **None**, **Beeps**, or **Wave**.
- 3 Turn on **Connection Success** to play the specified .wav file (or beep) when a connection is made to an FTP site. If **Wave** is selected under **Sounds**, specify the .wav file to play when a connection is made. Use the browse button to locate a file.

- 4 Turn on **Connection Failure** to play the specified .wav file (or beep) when a connection fails. If **Wave** is selected under **Sounds**, specify the .wav file to play when a connection fails. Use the browse button to locate the file.
- 5 Turn on **Transfer Complete Success** to play the specified .wav file (or beep) when a transfer succeeds. If **Wave** is selected under **Sounds**, specify the .wav file to play when a transfer succeeds. Use the browse button to locate the file.
- 6 Turn **Transfer Complete Failure** to play the specified .wav file (or beep) when a transfer fails. If **Wave** is selected under **Sounds**, specify the .wav file to play when a transfer fails. Use the browse button to locate the file.
- 7 Turn on **Other Failures** to play the specified .wav file (or beep) when any error occurs during the retrieval of folders, renaming or deleting files or folders, or during other FTP errors. If **Wave** is selected under **Sounds**, specify the .wav file to play when such an error occurs. Use the browse button to locate a file.

Note

To have the same sounds as earlier versions of WS_FTP Pro, make sure this check box is *not* selected.

Disabling Sounds (Classic Interface Only)

You can have WS_FTP Pro use no sound at all.

- 1 If you are not already viewing the **Sounds** tab, do the following
 - If you are in the “Connection” dialog box, close it.
 - Select **Options** from the **View** menu.
 - Click the **Sounds** tab.
- 2 Under **Sounds**, select **None**.

Viewing the Protocol Conversation

Since FTP is a protocol, it can be characterized as a conversation between an FTP client (WS_FTP Pro on your PC) and an FTP server (the current FTP site).

The protocol conversation consists of FTP *commands* and FTP server *replies*. You don't need to be familiar with these commands and replies when you use WS_FTP Pro because WS_FTP Pro automatically translates your menu choices, dialog box selections, and mouse moves into the protocol commands.

When you use WS_FTP Pro, the protocol conversation is shown just above the bottom row of buttons. The conversation looks something like the following illustration.

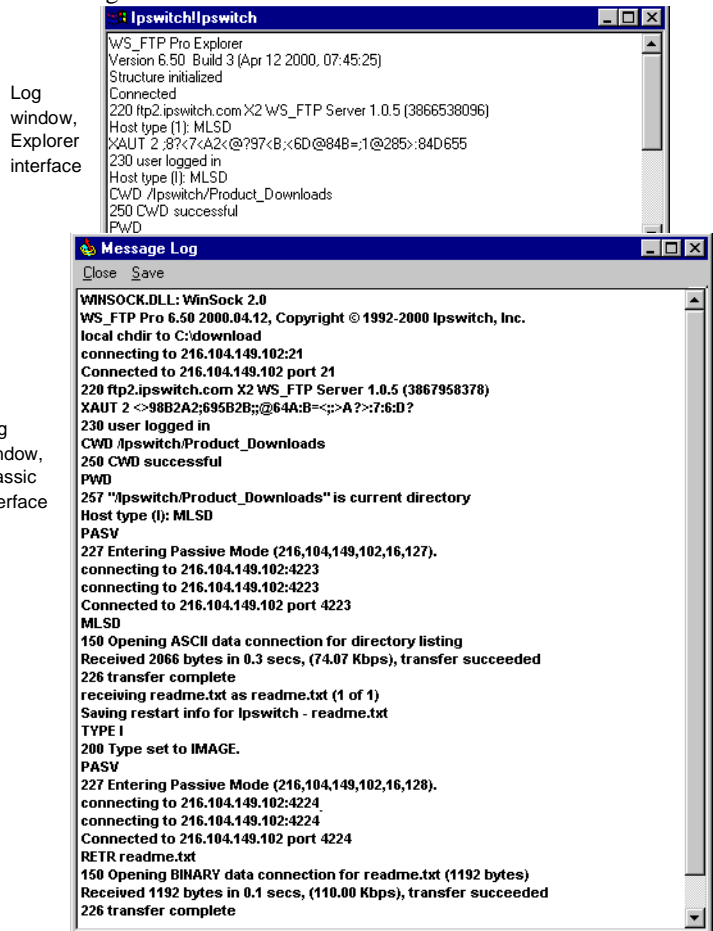
```
WINSOCK.DLL: WinSock 2.0
WS_FTP Pro 6.50 2000.04.12, Copyright © 1992-2000 Ipswitch, Inc.
local chdir to C:\download
--
connecting to 216.104.149.102:21
Connected to 216.104.149.102 port 21
220 ftp2.ipswitch.com X2 WS_FTP Server 1.0.5 (3867958378)
XAUT 2 <>98B2A2;695B2B;;@64A:B=<;>A?>:7:6:D?
230 user logged in
CWD /ipswitch/Product_Downloads
250 CWD successful
PWD
257 "/ipswitch/Product_Downloads" is current directory
Host type (I): MLSD
PASV
227 Entering Passive Mode (216,104,149,102,16,127).
connecting to 216.104.149.102:4223
--
connecting to 216.104.149.102:4223
Connected to 216.104.149.102 port 4223
MLSD
150 Opening ASCII data connection for directory listing
Received 2066 bytes in 0.3 secs, (74.07 Kbps), transfer succeeded
226 transfer complete
receiving readme.txt as readme.txt (1 of 1)
Saving restart info for Ipswitch - readme.txt
TYPE I
200 Type set to IMAGE.
PASV
227 Entering Passive Mode (216,104,149,102,16,128).
connecting to 216.104.149.102:4224
--
connecting to 216.104.149.102:4224
Connected to 216.104.149.102 port 4224
RETR readme.txt
150 Opening BINARY data connection for readme.txt (1192 bytes)
Received 1192 bytes in 0.1 secs, (110.00 Kbps), transfer succeeded
226 transfer complete
```

If you're curious about the FTP protocol, or if you need to troubleshoot, you can view these messages in a window and save them to a file.

Do one of the following:

- **In the Classic interface**, if you are in the “Connection” dialog box, close it. Then, select **Log Window** from the **View** menu.
- **In the Explorer interface**, while in a file listing on an FTP site, select **View Log** from the **File** menu.

You see a log window similar to one of those shown in the following illustration.



Note

The log is cleared each time you exit WS_FTP Pro or WS_FTP Pro Explorer, so if you think you might want to save these protocol messages, be sure to save the log. (*In the Classic interface*, select **Save** while you are viewing the log. *In the Explorer interface*, copy the contents of the window and paste them into a text or word processing document.)

The messages in the Classic interface log above are explained in the following table:

Log Message	What it means
WINSOCK.DLL: WinSock 2.0	WS_FTP Pro sends a message that it is using the Winsock DLL.
WS_FTP Pro 6.50 2000.04.12, Copyright © 1992-2000 Ipswitch, Inc.	WS_FTP sends an identifying message.
local chdir to C:\download	WS_FTP Pro sends a message that it is changing the current local folder to "download."
connecting to 216.104.149.102:21	WS_FTP Pro sends a message that it is attempting to contact the FTP server and make a control connection on Port 21.
Connected to 216.104.149.102 port 21	The FTP server confirms the control connection.
220 ftp2.ipswitch.com X2 WS_FTP Server 1.0.5 (3867193148)	The FTP server sends its identifying message.
XAUT 2 =9C?=1;?>1C>=1<6>;@;>9<4=@D5>@88B:A1	The FTP server sends a message that the user ID and password have been authenticated.
230 user logged in	The server replies that the user is logged in.
CWD /ipswitch/ Product_Downloads	WS_FTP Pro sends a command to change the current directory on the FTP site.
250 CWD successful	The server replies that the Change Working Directory command was executed successfully.
PWD	WS_FTP Pro sends a command requesting the FTP site to identify the current directory.
257 "/ipswitch/ Product_Downloads" is current directory	The FTP server replies with the current directory.
Host type (I): MLSD	WS_FTP sends a message that it detects that the FTP server is the MLSD type.
PASV	WS_FTP Pro requests a passive data connection.

Log Message	What it means
227 Entering Passive Mode (216.104.149.102,16,127)	The server replies that it is entering passive mode, and is waiting for WS_FTP Pro to specify a port for the data connection.
connecting to 216.104.149.102:4223	WS_FTP Pro sends the message that it wants the data connection on Port 4223.
Connected to 216.104.149.102 port 4223	The FTP Server replies that it is connected to Port 4223.
MLSD	WS_FTP Pro requests a listing of the current directory on the FTP server.
150 Opening ASCII data connection for directory listing	The server replies that it has opened the data connection for the directory listing.
Received 2066 bytes in 0.3 secs, (74.07 Kbps), transfer succeeded	WS_FTP Pro sends a message that it has received the directory listing.
226 transfer complete	The server replies that the transfer of directory information is complete.
receiving readme.txt as readme.txt (1 of 1)	WS_FTP Pro says that it is receiving the file the user requested to download (readme.txt).
Saving restart info for Ipswitch - readme.txt	WS_FTP Pro saves the restart information in case there is a problem with the transfer and it might need to be restarted.
TYPE I	WS_FTP Pro requests that the transfer type be set to image (binary).
200 Type set to IMAGE.	The server replies that the transfer type is set.
PASV	WS_FTP Pro tells the server to make a passive connection.
227 Entering Passive Mode (216,104,149,102,16,128)	The server replies that it has made the passive connection.
connecting to 216.104.149.102:4224	WS_FTP Pro tells the server that it wants to use Port 4224 for the data connection.
Connected to 216.104.149.102 port 4224	The server replies that it is connected on Port 4224.
RETR readme.txt	WS_FTP Pro requests the server to send a copy of the readme.txt file to the local system.
150 Opening BINARY data connection for readme.txt (1192 bytes)	The server replies that it is opening a binary data connection for the readme.txt file.
Received 1192 bytes in 0.1 secs, (110.00 Kbps), transfer succeeded	WS_FTP Pro replies that it has received the readme.txt file.
226 transfer complete	The server replies that it has successfully transferred the readme.txt file.

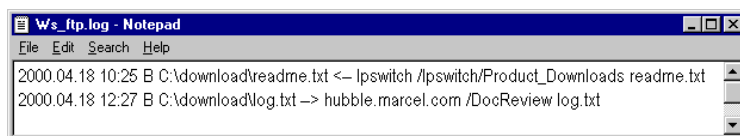
Some FTP sites also display messages about the site in the log. These may describe the site's hours of operation, an e-mail contact, or list other sites that contain the same information (called "mirror" sites).

To fully understand the protocol conversation in the log window, you can read RFC 959. However, to look up the most common commands and replies that appear in the log, you can simply use this chapter in conjunction with "Appendix A: Highlights of RFC 959" on page 123 and "Appendix B: Textual Error Messages" on page 135.

Viewing the Transfer Log (*Ws_ftp.log*)

WS_FTP can log each transfer you do if you enable the logging capability. When you enable logging, then each time you do a transfer, WS_FTP Pro creates an entry in a file named *Ws_ftp.log*.

The *Ws_ftp.log* file shows one line for each transfer, along with the date, time, the path and filename on your PC, an arrow indicating whether the transfer was an upload or download, and the path and filename on the FTP site.



In the Classic interface, when logging is turned on, WS_FTP Pro creates a log file in each folder to which you download a file; this is the default behavior.

If you prefer to have just *one* *Ws_ftp.log* file:

- Select **Options** from the **View** menu.
- Click the **General** tab.
- Enter a complete path in the **Log filename** box.

If you prefer to not create *any* transfer log (*Ws_ftp.log*) files

- 1 Select **Options** from the **View** menu.
- 2 Click the **General** tab.
- 3 Turn off **Enable log**.

In the Explorer interface, when logging is turned on, WS_FTP Pro Explorer creates just one log file; by default, this file is saved at the root level of your hard disk.

To change the location of the log file:

- 1 Select **WS_FTP Pro Explorer Properties** from the **File** menu.
- 2 Click the **Logging** tab.
- 3 Enter a complete path in the **Log Filename** box.

If you prefer to not create *any* transfer log (*Wsftp.log*) files:

- 1 Select **WS_FTP Pro Explorer Properties** from the **View** menu.
- 2 Click the **Logging** tab.
- 3 Turn off **Enable Logging**.

Saving Debug Messages

WS_FTP Pro can also save more detailed (“debug”) messages that may be useful for troubleshooting.

In the Classic interface, the more detailed messages are added to the *Wsftp.log* file. To get these messages:

- 1 Select **Options** from the **View** menu.
- 2 Click the **General** tab.
- 3 Turn on **Debug Messages**.

In the Explorer interface, the more detailed messages are saved to a separate file, *Wsftpd.log*. To get these messages:

- 1 Select **WS_FTP Pro Explorer Properties** from the **File** menu.
- 2 Click the **Debug** tab.
- 3 Turn on **Enable Debug Logging**.

Chapter 5: Working with Files and Folders

This chapter guides you through the following topics.

- **Working with file dates and times**
 - Preserving file date and time on downloads
 - Transferring only newer files
 - Adjusting for a different time zone
 - Working with timestamp problems on uploads
 - Setting the date format
- **Deleting**
 - Deleting files and folders
 - Deleting non-empty folders
 - Confirming deletions
- **Naming and Renaming Files**
 - Renaming a file *before*, *after*, or *as* you transfer
 - Getting prompted for path and file name
 - Converting file names to lowercase letters
 - Having the FTP site or WS_FTP Pro assign a unique file name
 - Converting file extensions
- **Changing Permissions for UNIX files**

Preserving File Date and Time

By default, when you transfer files, the file date and time are updated to the date and time of the transfer. You can change this, so that the date and time are preserved.

To set how date and time are handled:

- 1 Do one of the following:
 - ***In the Classic interface***, if you are in the “Connection” dialog box, close it. Select **Options** from the **View** menu, and click the **Pro** tab.

- *In the Explorer interface*, select **WS_FTP Pro Explorer Properties** from the **File** menu. You see the **Preferences** tab.

- 2 Turn **Preserve file time on transfer...** on or off.

Important Note about Uploads

If you turn on **Preserve file time on transfer...**, WS_FTP Pro will *always* preserve the date on *downloads*. However, it will only *attempt* to preserve the date and time on uploads, because many FTP sites do not support this feature.

If the preservation of file date and time is not supported by the FTP site, you will get an “MDTM” error when you upload files to the site. Note, however, that the files will transfer correctly with updated timestamps from the FTP site. (The “MDTM” error is not serious, even though it displays in red.)

Transferring Only Newer Files (Classic Interface Only)

When you transfer a folder to a location where a folder with the same name already exists, you can make sure WS_FTP Pro does not overwrite a file that has the same or a newer date. To do this, you set WS_FTP Pro to transfer only files having newer dates and times than the files in the folder to which you are transferring.

To set whether or not WS_FTP Pro transfers only newer files:

- 1 If you are in the “Connection” dialog box, close it.
- 2 Select **Options** from the **View** menu.
- 3 Click the **Pro** tab.
- 4 Turn **Don't transfer older or same files during folder transfers** on or off.

Adjusting for a Different Time Zone

You can have WS_FTP Pro adjust the display of file dates and times on an FTP site so they represent the times and dates in your time zone. For example, if an FTP site is in a time zone three hours earlier than your time zone, you can adjust a date and time of 11/10/2000 1:00 AM to 11/9/2000 10:00 PM.

To adjust for an FTP site in a different time zone:

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select the site. Then, click the **Advanced Properties** button, and click the **Startup** tab.
 - *In the Explorer interface*, select the site and select **Site Properties** from the **File** menu. Then, click the **Startup** tab.
- 2 In the **Time offset in hours** text box, enter the difference in whole hours between the time zone of your PC and the time zone of the FTP site. Use a positive number if the site is in an earlier time zone (west), a negative number for a later time zone (east).

Setting the Date Format (Classic Interface Only)

Dates can appear a number of different ways in the WS_FTP Pro Classic interface. We recommend you use four-digit years for accuracy. Your choices are:

- Years as two digits (for example, 00) or four digits (for example, 2000).
- Dates as year, month, day (for example, June 9, 2000 would be 20000609).
- Dates as month, day, year (for example, June 9, 2000 would be 06092000).
- Dates as day, month, year (for example, June 9, 2000 would be 09062000).

In the Classic interface, set the date format as follows:

- 1 If you are in the “Connection” dialog box, close it.
- 2 Select **Options** from the **View** menu.
- 3 Click the **Display** tab.
- 4 Under **Date Format**, select the desired setting.

Deleting Files and Folders

To delete a file or folder from an FTP site (if you have deletion permission on the site):

- 1 Select the file or folder.
- 2 Select **Delete**, **Delete files**, or **Delete folder** from the right-mouse menu.

Important Notes

- If a folder is not empty, you will not be able to delete it unless you have turned on **Allow deletion of non-empty folders** as explained in the next section.
- If you cannot delete a file from an FTP site, you may not have deletion permission on the FTP site.

Deleting Non-Empty Folders from an FTP Site

You can always delete *empty* folders from an FTP site, if the site allows it. However to delete *non-empty* folders and all their contents from an FTP site, you need to turn on the option.

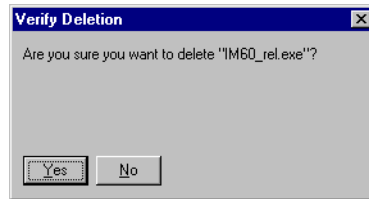
To set whether or not you can delete non-empty folders:

- 1 Do one of the following:
 - *In the Classic interface*, if you are in the “Connection” dialog box, close it. Select **Options** from the **View** menu, and click the **Pro** tab.
 - *In the Explorer interface*, select **WS_FTP Pro Explorer Properties** from the **File** menu to see the **Preferences** tab.
- 2 Turn **Allow deletion of non-empty folders** on or off.

Confirming Deletions

Most FTP sites allow you to delete files (if you have permission to do so from the site administrator) without giving you a warning.

However, you can have WS_FTP Pro display a confirmation when you are about to delete a file. This gives you a chance to change your mind. You can turn on this option for a particular FTP site, for all sites in a particular folder, or all sites.



To verify deletions from a particular site, or from all sites in a particular folder:

- 1 Do one of the following:
 - ***In the Classic interface***, from the “Connection” dialog box, select the site or the folder, click the **Advanced Properties** button, and click the **Session** tab.
 - ***In the Explorer interface***, select the site or folder, select **Site Properties** from the **File** menu, and click the **Session** tab.
- 2 Turn on **Verify Deletions**.

To set the default for *all* sites:

- 1 Do one of the following:
 - ***In the Classic interface***, select **Options** from the **View** menu, and then click the **General** tab.
 - ***In the Explorer interface***, select **WS_FTP Pro Explorer Properties** from the **File** menu to view the **Preferences** tab.
- 2 Turn on **Verify Deletions**.
- 3 (Optional in the Classic interface) Click **Set as Default**.

Note

When you turn *on* this option (and click **Set as Default** in the Classic interface), the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

Renaming a File Before or After Transfer

Not all FTP sites allow you to rename files and folders on the site. You can rename files only if you have an account on the FTP site and permission to rename files and folders.

If you can not rename a file on an FTP site, you may not have renaming privileges on the site, or you may be trying to use a long name on an FTP site that does not allow long names. Try a name of eight characters or less.

To rename a file on an FTP site:

- 1 Select the file(s).
- 2 Select **Rename** from the right-mouse menu. You are prompted for the new name.
- 3 Enter the new name for the item and click **OK**.

If you selected multiple files, you are prompted to rename the next file.

Renaming a File As You Transfer It

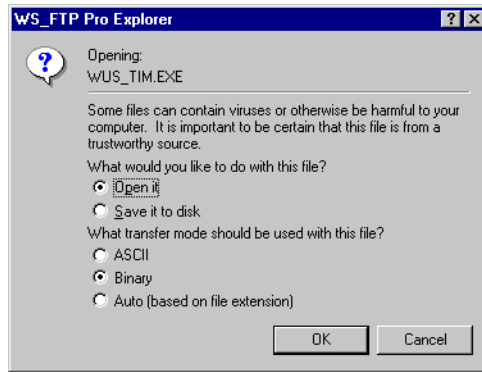
You can get a prompt that allows you to enter a path and name for each file you transfer to or from the site. You can also rename just one file as you transfer it as described below.

In the Classic interface,

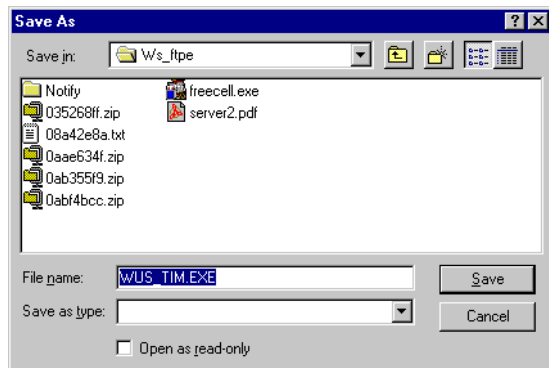
- 1 Select the file.
- 2 Press and hold the Ctrl key while you elect **Upload** or **Download** from the **File** menu. You are prompted for a file name and location.
- 3 Specify the location (path) and enter a new file name.
- 4 Click **OK**.

In the Explorer interface,

- 1 Select the file.
- 2 Select **Open...** from the right mouse-menu. You see the following dialog box.



- 3 Select **Save it to disk**.
- 4 (Optional) Select the transfer mode.
- 5 Click **OK**. You see the “Save As” dialog box in which you can enter a new name.



Note

If the name is not accepted, you may be trying to use a long name on an FTP site that does not allow long names. Try a name of eight characters or less.

Getting Prompted for Path and File Name

When you transfer a file, WS_FTP Pro can automatically display a prompt that shows you the proposed destination path and file name and allows you to confirm or change them.



You can get prompted for transfers to or from:

- A particular site
- All sites in a particular folder
- All transfers (unless overridden by site or folder settings)

To get a prompt for transfers to or from a particular site, or all sites in a particular folder:

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select a file or folder, and click the **Advanced Properties** button.
 - *In the Explorer interface*, select the site or folder, and select **Site Properties** from the **File** menu.
- 2 Click the **Session** tab.
- 3 Turn on **Prompt for Destination File Names**.

To set the default for all sites:

- 1 Do one of the following:
 - *In the Classic interface*, if you are in the “Connection” dialog box, close it. Then, select **Options** from the **View** menu, and click the **Session (cont'd)** tab.
 - *In the Explorer interface*, select **WS_FTP Pro Explorer Properties** from the **File** menu to view the **Preferences** tab.
- 2 Turn on **Prompt for Destination File Names**.
- 3 (Optional in the Classic) Click **Set as Default**.

Note

When you turn *on* this option (and click **Set as Default** in the Classic interface), the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

When this option is turned on, you can bypass the prompt by holding down the Ctrl key when you select **Upload** or **Download** from the **File** menu.

Converting File Names to Lowercase Letters

Some sites require file names that use all lowercase letters. You can have WS_FTP automatically convert file names to all lowercase as you transfer them.



You can set this option for transfers to and from:

- A particular site
- All sites in a particular folder
- All transfers (unless overridden by site or folder settings)

To convert uploaded file names to lowercase for a particular site, or all of sites in a particular folder:

- 1 Do one of the following:
 - *In the Classic interface*, from the “Connection” dialog box, select a site or folder and click the **Advanced Properties** button. Then click the **Session** tab.
 - *In the Explorer interface*, select the site and then select **Site Properties** from the **File** menu. Then click the **Session** tab.
- 2 Turn on **Force Lowercase Remote Names**.

To set the default for *all* uploads:

- 1 Do one of the following:
 - *In the Classic interface*, if you are in the “Connection” dialog box, close it. Then, select **Options** from the **View** menu, and click the **Session** tab.
 - *In the Explorer interface*, select **WS_FTP Pro Explorer Properties** from the **File** menu to view the **Preferences** tab.
- 2 Turn on **Force Lowercase Remote Names**.
- 3 (Optional in the Classic) Click **Set as Default**.

Note

When you turn *on* this option (and click **Set as Default** in the Classic interface), the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

Having the FTP Site Assign a Unique File Name (Classic Interface Only)

You can have WS_FTP Pro make sure the uploaded file names do not conflict with existing files if the FTP site supports the FTP command, STOU. The new filename is determined by the FTP site.

In the Classic interface,

- 1 Make sure you are connected to a site.
- 2 Select **Options** from the **View** menu.
- 3 Click the **Session (cont'd)** tab.
- 4 Turn on **Send Unique (FTP Site assigns name)**.
- 5 (Optional) Click **Set as Default**.

Note

When you turn *on* this option and click **Set as Default**, the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

Having WS_FTP Pro Assign a Unique File Name (Classic Interface Only)

You can have WS_FTP Pro make sure downloaded file names do not conflict with existing files. The new filename is changed so that the sixth through eighth characters of the filename are a number between 000 and 999.

- 1 Make sure you are connected to a site.
- 2 Select **Options** from the **View** menu.
- 3 Click the **Session (cont'd)** tab.
- 4 Turn on **Receive Unique (WS_FTP assigns name)**.
- 5 (Optional) Click **Set as Default**.

Note

When you turn *on* this option and click **Set as Default**, the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

Converting File Extensions (Classic Interface Only)

You can convert file extensions of transferred files to a new extension. For example, if an FTP site uses *.html* for HTML files and your PC uses *.htm*, you can specify that all files with the extension *.html* are converted to *.htm* when you download them.

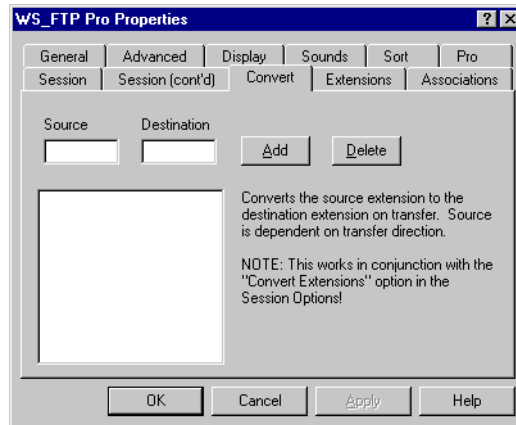
To add an extension conversion:

- 1 If you are in the “Connection” dialog box, close it.
- 2 Select **Options** from the **View** menu.
- 3 Click the **Session** tab.
- 4 Turn on **Convert Extensions** to enable the automatic conversion of file extensions.
- 5 (Optional) Click **Set as Default**.

Note

When you turn *on* this option and click **Set as Default**, the option is set as the default for all sites; that is, it becomes the setting for all site configurations unless it is overridden by the settings for particular sites and folders.

- 6 Click the **Convert** tab.



- 7 In the **Source** text box, enter the file extension of the source file; and in the **Destination** text box, enter the file extension to convert *to*. Note that what you enter depends on the file transfer direction. When downloading files, the *source* is the FTP site, and the *destination* is your PC. When uploading files, the *source* is your PC and the *destination* is the FTP site.

Extensions can be up to ten characters long and can contain periods. If you expect the extension to match on a period, you must specify a period. Some example extensions are: *.lst*, *.txt*, *.me*, *readme*. These are not DOS extensions, but the ending characters of a file name.

- 8 Click **Add**. The extension conversion appears in the list box.

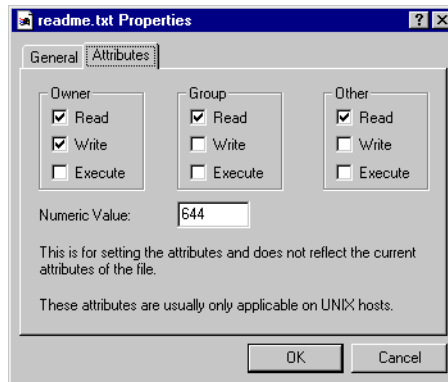
WS_FTP Pro automatically converts these extensions when transferring, if **Convert Extensions** is turned on (on the **Session** tab).

To delete an extension conversion, select it and click **Delete**.

Changing the Permissions for UNIX Files

You can change modes for a UNIX file on an FTP site, provided you have permission.

- 1 Do one of the following:
 - *In the Classic interface*, select the file, and then select **chmod (UNIX)** from the right-mouse menu.
 - *In the Explorer interface*, select the file and select **Item Properties** from the right mouse menu. Then, click the **Attributes** tab.



Note

The selected options do not necessarily indicate the current permissions for the selected file or folder!

- 2 Do one of the following:
 - Select the desired options by clicking the appropriate check boxes.
 - Enter a three- or four-digit number that represents the options (as described in the table below).
- 3 Click the **OK** button.

Background Information

Permissions can also be expressed as three- or four-digit values; for example, 1644.

- The first digit is interpreted as follows:
 - If the first digit is 1 (known in UNIX circles as the “sticky bit”), it sets the link permission to directories or sets the “save-text” attribute for a file.
 - If the first digit is 2, it sets the group ID on execution.
 - If the first digit is 4, it sets the user ID on execution.
- The second digit expresses **Owner** permissions
- The third, **Group** permissions
- The fourth, **Other**.

Four-digit values are used in the WS_FTP Pro log, in the message area, and by some system administrators and ISPs.

The table below shows how WS_FTP Pro check box options correspond to the last three digits. The third column shows the possible values for **Owner**, **Group**, and **Other** as viewed in the ten-position value in the first column of a directory list for a UNIX site.

Selected options in WS_FTP Pro	2nd, 3rd, or 4th digit of 4-digit number	Permissions in directory list
none	0	---
Execute	1	--X
Write	2	-W-
Write, Execute	3	-WX
Read	4	r--
Read, Execute	5	r-X
Read, Write	6	rw-
Read, Write, Execute	7	rwX

In the directory list, the first position indicates whether the item is a file (-, s, S, or t) or directory (d), while positions two through ten show the permissions for **Owner**, **Group**, and **Other**.

```

total 6
drwxr-x--x  6 root  ftp      1024 Jun 26 04:43 .
drwxr-x--x  6 root  root     1024 Sep 27 16:01 ..
drwxr-x--x 16 ftp   ftp      1024 Jun  7 15:00 MP3
drwxr-x--x 16 500   500      1024 May 21 04:03 Breton
drwxr-x--x  4 500   ftp      1024 Mar 24 1998 softwa
drwxr-x--x  2 root  ftp      1024 Sep 15 18:54 upload
  
```

For example, the value 751 corresponds to `drwxr-x--x` in the directory list. This expression is comprised of four parts:

	d	rwX	r-X	--X
First position indicates whether item is a file (-,s,S, or t) or directory (d)		Positions 2-4 indicate Owner permissions: read, write, execute.	Positions 5-7 indicate Group permissions: read and execute.	Positions 8-10 indicate Other permissions: execute only.

Note

If you attempt to change permissions, check the message area or the log to see if you were successful.

Chapter 6: Using Firewalls

Some organizations separate their local networks from the rest of the Internet by installing a “firewall” or “gateway.” A firewall is a system or software which is configured to prevent particular types of access or information from entering the network. Most firewalls block the flow into the local area network, but allow individuals to access most resources outside of the network.

WS_FTP Pro lets you enter information about a particular firewall into a “firewall configuration,” which you can then use when connecting to a particular FTP site from behind that firewall. You can configure the firewall once, and then assign that firewall configuration to whatever sites need to use it.

Multiple Firewalls

There are several reasons you might want to create more than one firewall configuration. If you use a laptop computer in different locations that have different firewalls, you will want to set up a firewall configuration for each location, so you can switch to the appropriate firewall configuration when you are in each location.

Another reason you might want to set up multiple firewall configurations is that your network could have more than one router configured as a firewall. In this case, you would assign a different firewall configuration to an FTP site depending on which part of the network you are working from.

Furthermore, you might have a number of “trusted sites” (for example, FTP sites owned by your company) for which you would use a different firewall (or no firewall).

Firewall Types

The following table lists all conventional firewall types and the information about each that you will need to procure and enter into WS_FTP Pro.

Type of Firewall	Information you need to enter in WS_FTP Pro
Proxy OPEN	Host Name (or Address)
SITE hostname	Host Name (or Address), User Name (ID)
Transparent	User Name (ID), Password
USER after logon	Host Name (or Address), User Name (ID), Password
USER fireID@remoteHost	Host Name (or Address), User Name (ID), Password
USER remoteID@fireID@remoteHost	Host Name (or Address), User Name (ID), Password
USER remoteID@remoteHost fireID	Host Name (or Address), User Name (ID), Password
USER with no logon	Host Name (or Address)

Configuring a Firewall

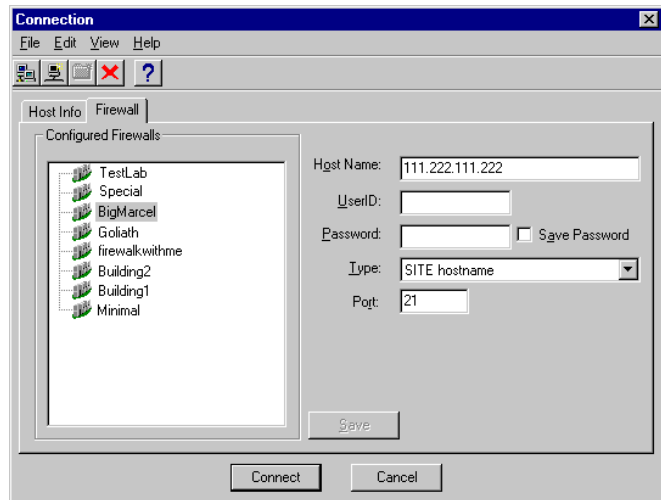
To enter firewall information, you will need to get data about your firewall from your network administrator. For more information, see “Firewall Types” above.

Note

For some router-based firewalls, you will want to use passive mode, in which the data connections are established by the FTP client (WS_FTP Pro) rather than by the FTP site.

In the Classic Interface, configure a firewall as follows:

- 1 If you are not already on the **Firewall** tab:
 - If you are connected to a site, select **Disconnect** from the **File** menu.
 - Click the **Connect** button to view the “Connection” dialog box.
 - Click the **Firewall** tab.
- 2 Select **New Firewall** from the **File** menu.
- 3 Enter a name for the firewall as well as the firewall official host name or IP address.
- 4 Click **OK**. The new firewall appears in the **Configured Firewalls** list.



- 5 Enter the firewall **User ID** or leave blank if not used.
- 6 Enter a **Password**. We do not recommend turning on **Save Password** unless you are the only user of your computer.
- 7 Select a **Type**.
- 8 Enter a **Port** number.
- 9 Click **Save**.

You can now assign the firewall configuration to the site, as described in “Using a Configured Firewall” below.

In the Explorer interface, configure a firewall as follows:

- 1 If you are not already on the **Firewall** tab:
 - Select a site on which you want to use the firewall.
 - Select **Site Properties** from the **File** menu.
 - Click the **Firewall** tab.
- 2 Click the **New** button.
- 3 Enter a name for the firewall configuration.

Note

If you use the name *Firewall* as the name of a firewall configuration, you can apply the firewall configuration named *Firewall* only by selecting the name “default” when you attempt to use the configuration as described below. This is due to the need for this version of WS_FTP Pro to be compatible with earlier versions.

- 4 Enter the firewall **Host Name** or IP Address.
- 5 Enter the firewall **User ID** (User Name) and **Password**.
- 6 Select the firewall **Type** from the drop-down list.
- 7 Enter the **Port** number.
- 8 Click **Save**.

You can now assign the firewall configuration to the site, as described below.

Using a Configured Firewall

Once you have configured a firewall, you can then apply the firewall configuration to an FTP site.

In the Classic interface:

- 1 If you are connected to a site, select **Close** from the **File** menu.
- 2 Select **Connect** from the **File** menu to view the “Connection” dialog box.
- 3 Make sure you are on the **Host Info** tab (not the **Firewall** tab).
- 4 In the **Firewall** box, select a firewall configuration.

Note

If you used the name *Firewall* as the name of a firewall configuration, you can select this configuration by selecting the name “default” from the drop-down list. This is due to the need for this version of WS_FTP Pro to be compatible with earlier versions.

In the Explorer Interface:

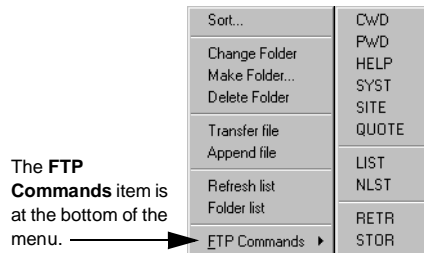
- 1 Select a site.
- 2 Select **Site Properties** from the **File** menu.
- 3 Make sure you are on the **Host Info** tab (not the **Firewall** tab).
- 4 In the **Firewall** box, select a firewall configuration.

Chapter 7: FTP Commands Pop-up Menu

WS_FTP Pro lets you use pull-down menus, dialog boxes, and mouse moves (such as drag and drop) to work with FTP sites; but behind the easy-to-use interface, WS_FTP Pro is translating your choices into FTP protocol commands, so you don't need to know the technical details of the protocol in order to transfer files. However, advanced users may sometimes want to enter FTP commands directly.

The complete File Transfer Protocol includes approximately 35 FTP commands, with new ones ("FTP extensions") proposed from time to time; these are listed in "Appendix A: Highlights of RFC 959" on page 123.

The ten commands advanced users are most likely to need are included in WS_FTP Pro on a sub-menu of the **FTP Commands** item on the right-mouse menu. To view this menu, right-click anywhere in the FTP site file listing, and highlight **FTP Commands**.



Each command on the pop-up menu is listed below. Following each command is an example of the command syntax, where <SP> means "enter a space" and <CRLF> means "enter a carriage return (line feed)."

CWD (CHANGE WORKING DIRECTORY)

CWD <SP> <pathname> <CRLF>

This command allows the user to work with a different directory or dataset without altering his login or account information.

PWD (PRINT WORKING DIRECTORY)

PWD <CRLF>

This command causes the name of the current working directory to be returned in the reply.

HELP

HELP [<SP> <string>] <CRLF>

This command causes the server to send a list of supported commands and other helpful information.

SYST (SYSTEM)

SYST <CRLF>

This command is used to find out the host type of the current FTP site.

SITE (SITE PARAMETERS)

SITE <SP> <string> <CRLF>

This allows you to enter a command that is *specific to the current FTP site*. WS_FTP Pro prefixes your entry with the word SITE. WS_FTP Pro sends it to the FTP site, unedited; it is up to you to determine the command syntax depending on the FTP site you are connected to. For more information on FTP commands, see “Appendix A: Highlights of RFC 959” on page 123.

QUOTE

QUOTE <string> <CRLF>

The QUOTE lets you enter any *standard* FTP command. WS_FTP Pro sends it to the FTP site, unedited; it is up to you to determine the command syntax depending on the FTP site you are connected to. For more information on FTP commands, see “Appendix A: Highlights of RFC 959” on page 123.

LIST (LIST)

LIST [<SP> <pathname>] <CRLF>

This command causes a list of file names and file details to be sent from the FTP site to WS_FTP Pro.

MLST

MLST [<SP> <pathname>] <CRLF>

This command causes the server to provide data about a particular object, whether a file or directory.

NLIST (NAME LIST)

NLIST [<SP> <pathname>] <CRLF>

This command causes a list of file names (with no other information) to be sent from the FTP site to WS_FTP Pro.

RETR (RETRIEVE)

RETR <SP> <pathname> <CRLF>

This command causes the server to transfer a copy of the file specified in *pathname* to the client. The status and contents of the file at the server site are unaffected.

STOR (STORE)

STOR <SP> <pathname> <CRLF>

This command causes the FTP server to accept the data transferred via the data connection and to store the data as a file at the FTP server. If the file specified in *pathname* exists at the server site, then its contents shall be replaced by the data being transferred. A new file is created at the FTP server if the file specified in *pathname* does not already exist.

Chapter 8: The Find Utility

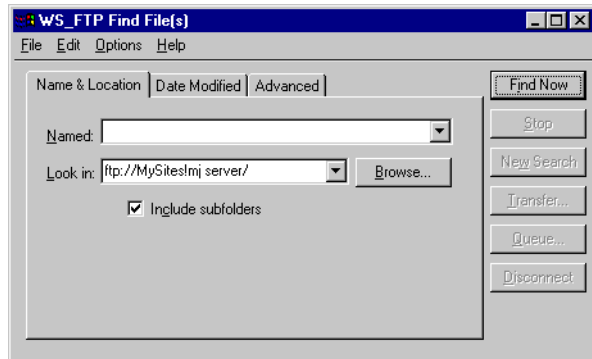
The WS_FTP Find Utility lets you search an FTP site for files that match your criteria, and then transfer the found files to your PC. This is especially useful for anyone who is looking for one particular file on a large, complex FTP site.

This chapter gives an overview of the Find Utility and some examples of how you might use it. For detailed instructions on using the Find Utility, start the Find Utility and use its online Help.

Using the Find Utility

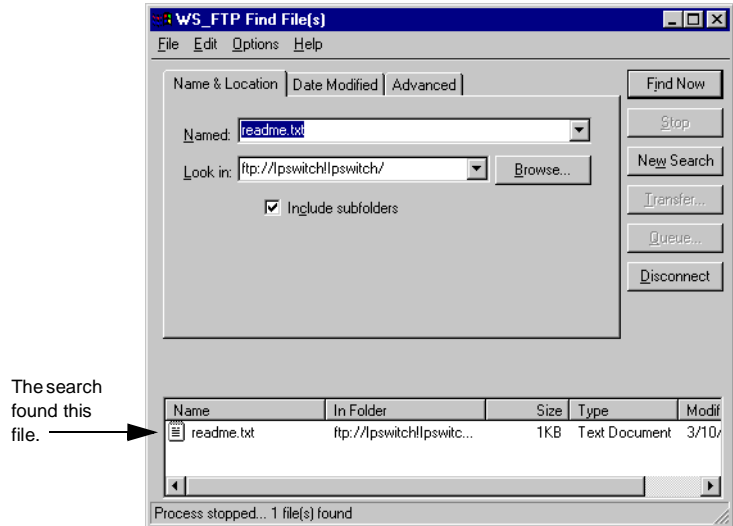
To find a file on an FTP site,

- 1 Start the Find Utility by doing one of the following:
 - Select **WS_FTP Find Utility** from the **Utilities** menu in the WS_FTP Pro Classic interface.
 - Click the Windows **Start** button and select **Programs -> WS_FTP Pro -> WS_FTP Find Utility**.



- 2 Use the **Look in** drop-down list to specify the site to which you will connect and search.
- 3 Enter your search criteria. You can search by name, date modified, size, or any combination of the three.
- 4 Click **Find Now**. The Find Utility connects to the FTP site and searches according to your criteria.

For example, if you search the Ipswitch FTP site for a file named *readme.txt*, the following results are displayed.



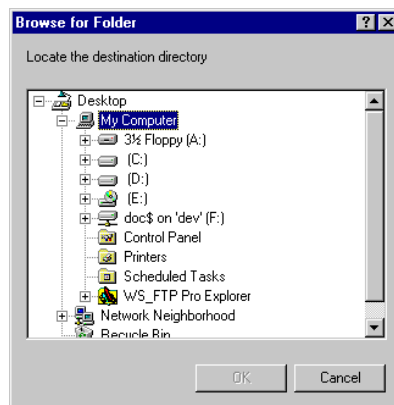
Using the Search Results

Once you locate a file on an FTP site, you can:

- Transfer it.
- Create a task for the WS_FTP Queuing Utility.

To transfer a file:

- 1 In the dialog box above, select the file you want to transfer, and click the **Transfer** button. You see a browse window.



- 2 Select the folder to which you want to download the file.

To create a task for the Queuing Utility:

- 1 Select the file or files for which you want to create a transfer task
- 2 Click the **Queue** button.

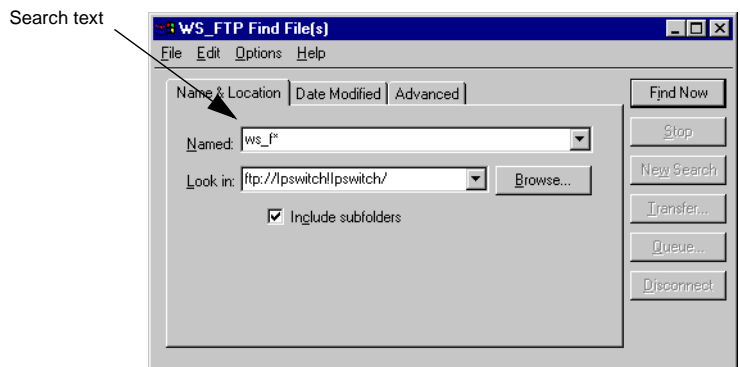
This displays the Queuing Utility window and starts the process of adding a download task to the queue. For more information on the WS_FTP Queuing Utility, see “Using the Queuing Utility” on page 105.

Examples

The following are examples of different types of searches.

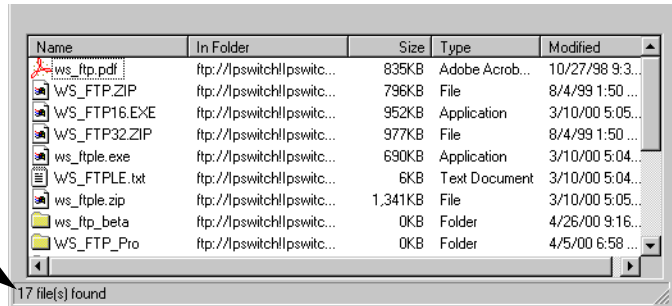
Finding a File When You Are Not Sure of Its Name

The graphic below shows how to search for a file when you are not sure of the correct full name. In this case, the name begins with *ws_f*, but the rest of the name is unknown. The * at the end is a “wildcard” that takes the place of the missing characters. When this search is run, the Find Utility locates every file on the site that begins with *ws_f*.



The results of the search are shown below. Notice that the Find Utility located 17 files and folders.

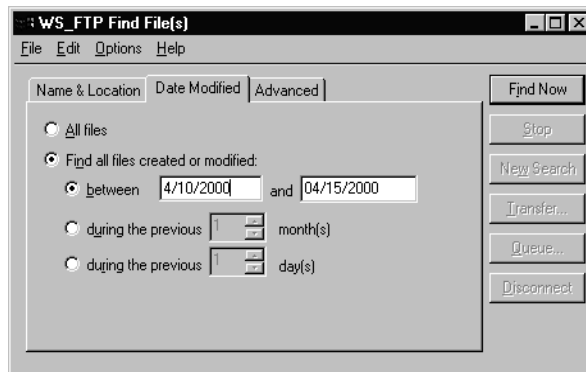
The number of files and folders found is displayed at the bottom of the window.



You can also use wildcard characters (* and ?) at the beginning of a name if you are unsure about the beginning characters. For example, searching for *.exe returns all files ending with the .exe file extension.

Finding a File Modified During a Specific Time Period

To search for a file modified during a specific time period, click the **Date Modified** tab and set the options you need. In the example below, the WS_FTP Find Utility will search for all files modified between April 10, 2000 and April 15, 2000.



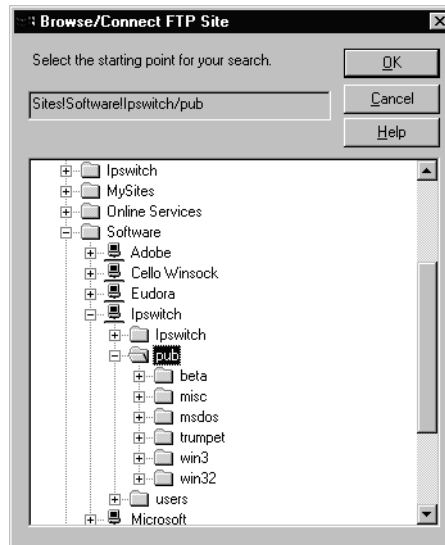
Finding a File in a Particular Folder

If you know the name of the folder in which the file you are looking for is stored, you can narrow your search by having the Find Utility look only in that folder.



To locate a particular folder:

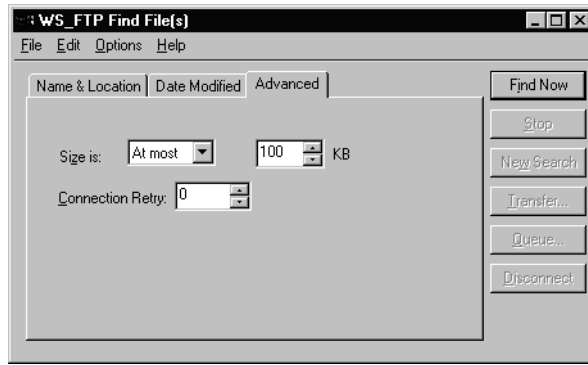
- 1 Click the **Browse** button next to the **Look In** field to connect to the selected site and display a list of the available folders.



- 2 Select the folder that you want to search.
- 3 Click **OK**. The **Look In** box is filled in with the path of the selected folder.
- 4 Click **Find Now** to search through the files in that folder.

Finding a File Smaller Than a Certain Size

If you want to limit the size of the files found in a given search, enter the FTP site and file name on the **Name & Location** tab, then click the **Advanced** tab.



In the **Size is** box, you can select **At least** or **At Most** then enter the file size in kilobytes in the **KB** box.

Chapter 9: Scripting

The WS_FTP Scripting Utility allows you to group any number of file transfer tasks into a script that can be executed with one action. This can be especially useful for file transfers that you do repeatedly.

This chapter gives an overview of the Scripting Utility and some examples of how you might use it. For detailed instructions on using the Scripting Utility, start the Scripting Utility and use its online Help.

Using scripts, you can:

- Connect to FTP sites
- Upload or download files
- Set the transfer mode
- Make, delete, and rename folders
- Rename files
- Execute a DOS command

Scripts can also have some limited flow control. They can:

- Check for the success or failure of the previous command
- Jump to another point in the script if either success or failure is detected

Suppose you post weekly reports on your company's FTP server for your co-workers in other cities to download. Let's assume you place the current week's reports in a folder named *Current*. You could create a script that:

- Changes the name of last week's *Current* folder to *Prior*.
- Creates a new folder named *Current*.
- Uploads your current weekly reports to the *Current* folder.

You can also create scripts for downloads that you do repeatedly.

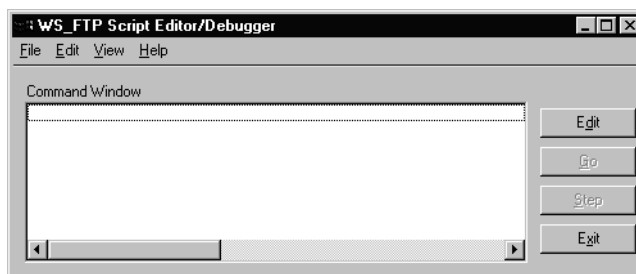
Start the Scripting Utility by doing one of the following:

- Select **WS_FTP Scripting Utility** from the **Utilities** menu in the WS_FTP Pro Classic interface.
- Click the Windows **Start** button and select **Programs -> WS_FTP Pro -> WS_FTP Find Utility**.

Writing and Debugging Scripts

To write and/or debug a script, start the Scripting Utility.

The files created by the WS_FTP Scripting Utility have a file extension of *.scp*. If you already have a program installed on your PC that uses the *.scp* file extension (such as the Palm OS software), you have to use a text editor such as Notepad to edit the script. Otherwise, for writing and debugging scripts, you will use the Script Editor/Debugger window.



An MS-DOS window is automatically opened behind the Editor/Debugger window to show you the output of SHELL commands.

Executing Scripts

You can execute scripts from either the Command Prompt or from the Scripting Utility itself.

Executing a Script from the Command Prompt

Go to the Command Prompt and type *ftpscript* followed by the appropriate command line parameters. For example,

```
ftpscript -f script1.scp
```

There are other parameters you can use with the *ftpscript* command. For detailed information, go to the Scripting Utility online Help and see “Executing Scripts”.

To be able to run a script from any location on your hard disk, we recommend that you place the Scripting Utility folder in the Path statement in your *Autoexec.bat* file – if you are running Windows 95 or Windows 98. If you’re using Windows NT, add the WS_FTP Pro folder to the path variable in the System Environment.

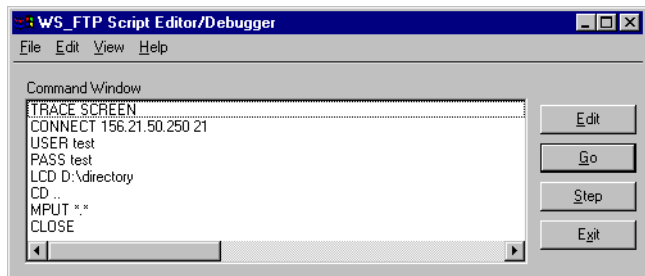
Running a Script from the Scripting Utility

To run a script from the Scripting Utility, start the utility, open the script, and click **Go**.

Example

In the following example, the script:

- 1 Turns on the Trace command to send detailed information to the Trace Screen.
- 2 Connects to the FTP server 156.21.50.250 port 21.
- 3 Logs onto the server with the user name *test*.
- 4 Logs onto the server with the password *test*.
- 5 Changes the local directory to D:\directory.
- 6 Goes up one directory level on the FTP server.
- 7 Copies all of the files in the D:\directory folder on your PC to the FTP server.
- 8 Disconnects from the FTP server.



Chapter 10: Synchronizing Files and Folders

The WS_FTP Synchronize Utility lets you synchronize (or “mirror”) directory structures between your system and a remote FTP server with minimal intervention.

It lets you keep remote sites up-to-date by automatically uploading files which have changed, while deleting files that have been removed from the master directory. This is especially useful for quickly and efficiently updating Web sites.

This chapter gives an overview of the Synchronize Utility and some examples of how you might use it. For detailed instructions on using the Synchronize Utility, start the Synchronize Utility and use its online Help.

A Word of Caution

The Synchronize Utility can easily erase or overwrite large numbers of files without prompting you.

To verify that the Synchronize Utility will do what you want, please run any new control files in “test mode” before running them for real. You can then peruse the contents of the status window to verify that the control file will do what you expect.

You should look for lines like:

```
# deleting filea.ext
# sending fileb.ext 19960217/00:00
(19950217/00:00)
# receiving filec.ext 19960217/00:00
(19950217/00:00)
```

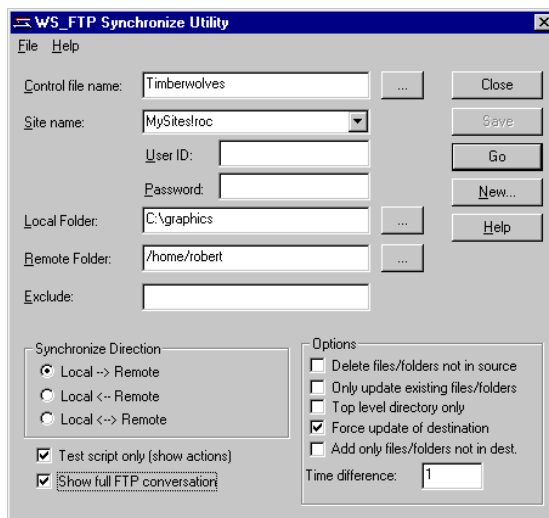
Using the Synchronize Utility

Start the Synchronize Utility by doing one of the following:

- Select **WS_FTP Synchronize Utility** from the **Utilities** menu in the WS_FTP Pro Classic interface.
- Click the Windows **Start** button and select **Programs -> WS_FTP Pro -> WS_FTP Synchronize Utility**.

Example

The following is an example of how you might use the WS_FTP Synchronize Utility.



When you click the **Go** button, the control file named *Timberwolves* is executed according to the parameters set on the WS_FTP Synchronize Utility screen:

- Synchronize makes a connection with the FTP site defined in the **Site name** box and logs on with the user name and password supplied.
- Once the connection is made, the program navigates to the '/home/robert' directory on the FTP site and the 'C:/graphics' directory on your PC.
- According to the options selected, the FTP site directory is made to mirror the local directory by creating folders not already there, and copying or updating files that need to be changed or added in order to make the directories mirror each other.
- Since the **Force update of destination** option is selected, all files that do not match are copied over or added regardless of the version date on the destination folder.

- With the **Show full FTP conversation** option selected, the status window displays the complete details.
- Since the **Test script only** option is also selected, the program attempts the complete action, but does not actually copy or create the files or folders. It only shows that the action succeeds or fails.

Note

We recommend that you use this option before you actually run each new script.

Chapter 11: Queuing Transfer Tasks

The WS_FTP Queuing Utility lets you create FTP tasks or “jobs” for transfers that you need to perform repeatedly or manually at a particular time. Each task can consist of any number of uploads and downloads of files and folders.

This chapter gives an overview of the Queuing Utility and some examples of how you might use it. For detailed instructions on using the Queuing Utility, start the Queuing Utility and use its online Help, or press F1.

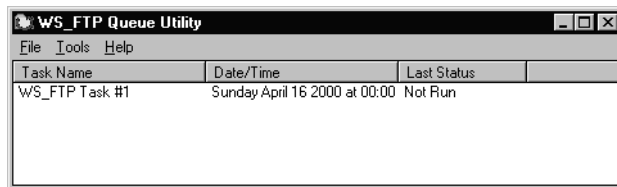
Using the Queuing Utility

When WS_FTP Pro is installed and you restart your PC, the WS_FTP Queuing Utility starts automatically; you will see its icon in the Windows Taskbar.

The WS_FTP Queuing Utility Icon



When you are ready to add a task to the queue, you activate the Queuing Utility window.

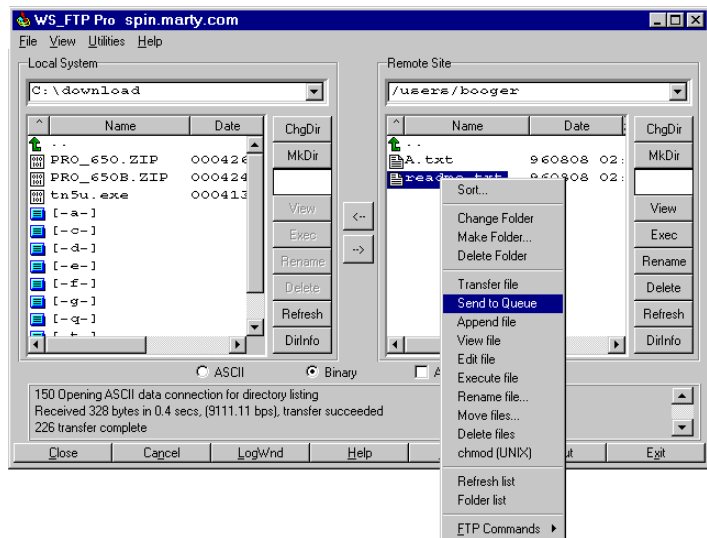


To access this window, do one of the following:

- Double-click the Queuing Utility icon in the Windows Taskbar.
- Select **WS_FTP Queuing Utility** from the **Utilities** menu in the WS_FTP Pro Classic interface.
- Click the Windows **Start** button and select **Programs -> WS_FTP Pro -> WS_FTP Queuing Utility**.

Once you are in the Queuing Utility window, you are ready to set up a file transfer task. You can:

- Add a pre-existing script to run at a particular time. (For more information on creating scripts, see “Chapter 9: Scripting” on page 97.)
- Drag and drop a file from your Desktop to the Queuing Utility window to create an upload task.
- Drag and drop a link from your Web browser to the Queuing Utility window to create a download task.
- Create a task from within WS_FTP Pro by right-clicking the file and selecting **Send to Queue**.



If you choose **Send to Queue** (the highlighted command shown above), the Queuing Utility will create a task that downloads the file named *readme.txt* to your PC.

The WS_FTP Queuing Utility will run the task at the time you schedule it to run, or you can make the task run on demand by using the **Run Now** option.

Examples

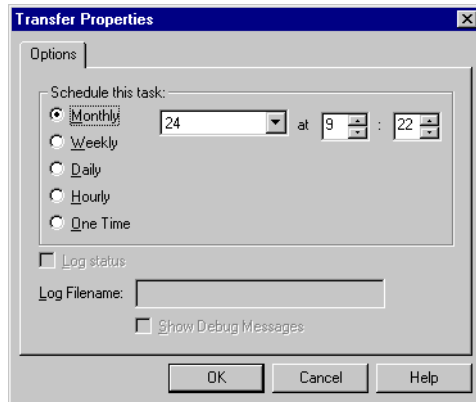
The following are examples of how you might use the WS_FTP Queuing Utility.

Adding an Existing Script to the Queue

To add an existing script to the queue:

- 1 Start the Queuing Utility as described above.
- 2 In the Queuing Utility window, select **File > Add Script**. A window opens in which you can browse to find the script you want to use for the update process.
- 3 Locate and select the script name, and click **Open**.

The “Transfer Properties” dialog box is displayed so you can set the time and frequency of the task.



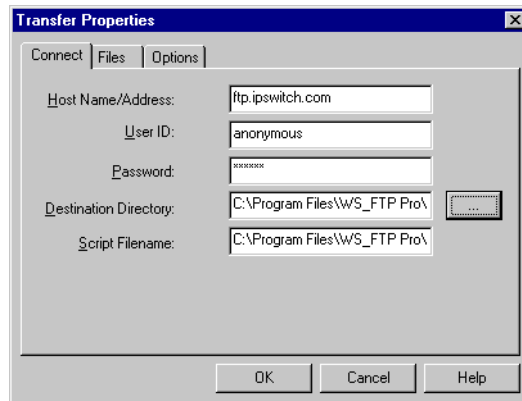
- 4 (Optional) To run the task one time, select **One Time** and set the time.
- 5 Click **OK** to add the task to the queue.
- 6 (Optional) Select **File > Run Now** to run the task immediately.

Running a Quick Download Using Drag and Drop

When you find an FTP URL link on the World Wide Web and want to download the referenced file, you no longer need to download the file right then using your Web browser. Instead, you can create a task for the WS_FTP Queuing Utility to download the file at your convenience.

To do this:

- 1 Start your Web browser, and locate the FTP URL.
- 2 Start the WS_FTP Queuing Utility.
- 3 Size and position the windows so that the Web browser and WS_FTP Queuing Utility windows are both visible on your Desktop.
- 4 Drag the link from the browser and drop it in the WS_FTP Queuing Utility window. The “Transfer Properties” dialog box appears.



- 5 Enter the connection information for the site, including the user ID and password.
- 6 Click the **browse (...)** button next to the **Destination Directory** box to select the location to which you want to download the file.
- 7 Click the **Options** tab and click the **One Time** option to specify that this is not a reoccurring download.
- 8 Click **OK** to add the task to the queue.

When you are ready to download the file, run the task by selecting **File > Run Now**.

Updating a Web Site on a Nightly Basis

If you have a Web site that you would like to update each and every night, without having to manually upload all of the files you have recently changed, you can set up a script and schedule it to run every night.

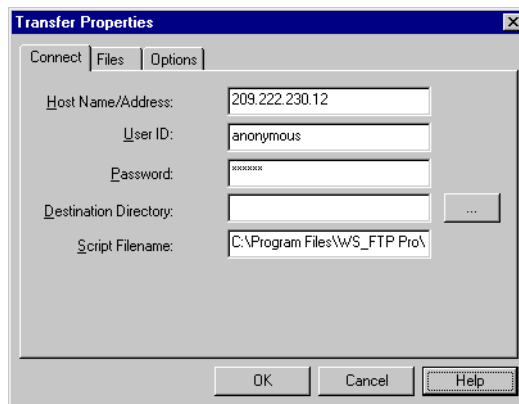
- 1 Select the files from your Desktop, or from Windows Explorer and drag and drop them into the Queuing Utility window.

You can select multiple files or folders by holding the **Ctrl** key and clicking the name.

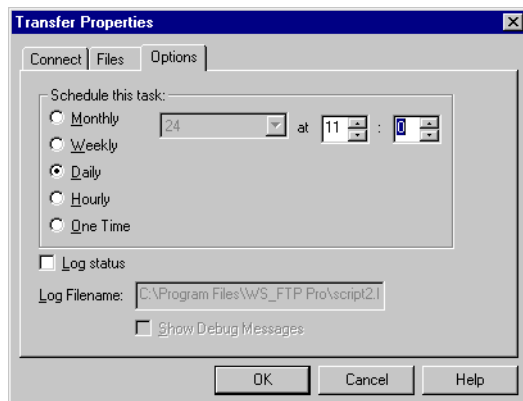
Note

You can only drag and drop one group of files for each task. Furthermore, at this time, you cannot add files to a task that has already been established.

The “Transfer Properties” dialog box is displayed when you drop the files into the Queuing Utility window.



- 2 In the dialog box, define the parameters with which you will connect to the FTP site.
- 3 Click the **Options** tab to set the schedule for the task to be run. In the following illustration, we have set up this task to run every day at 11:00 PM.



- 4 Click **OK** to add this task to the queue.

Chapter 12: Using the Command Line

You can use the command line from the MS-DOS prompt to run the WS_FTP Pro Classic interface.

Note

You can also use the WS_FTP Scripting and Queuing Utilities to automate the transfer and management of files through basic FTP commands. For more information, see “Chapter 9: Scripting” on page 97 and “Chapter 11: Queuing Transfer Tasks” on page 105.

When you use the command line, you are actually running a *subset* of the functionality of the Classic interface. Using the command line, you can:

- Upload and download files
- Specify ASCII or binary transfer mode
- Convert file names to lowercase when uploading
- Set up pre-scheduled transfers

However, the command line doesn’t provide the means to rename files on an FTP site, delete files from an FTP site, or create folders on an FTP site. Nor can you preserve time stamps or convert file extensions when transferring files.

Note

In order to be able to use the command line from any location on your hard disk, we recommend that you place the WS_FTP Pro folder in the Path statement in your *Autoexec.bat* file – if you are running Windows 95, 98, or 2000. If you are using Windows NT, add the WS_FTP Pro folder to the path variable in the System Environment. Otherwise, change to your WS_FTP Pro folder when you use the commands described below.

Basic Command Line Syntax

To use the command line, you type the command name `ftp95pro` followed by whatever arguments you need to complete your task.

```
ftp95pro -i games.ini -p Damion -s local:c:Tag.doc -d Damion:/pub/Tag.doc
```

The four arguments used most often are `-i`, `-p`, `-s`, and `-d`. These arguments tell WS_FTP Pro, respectively, the name of the folder where the site is stored, the name of the site configuration, the **source** of the transfer, and the **destination** of the transfer.

Note

The `-i` argument must be the first argument after the `ftp95pro` command. Furthermore, the path on the FTP server (whether it is the source or destination) must be complete and correct; use the fully qualified format:

```
-d sitename:/root/path/filename
```

Specifying the FTP Site

You can use names of configured sites to do FTP transfers from the command line. *If your site names have no spaces in them*, type the commands as shown below. If, however, your site names have spaces, enclose the entire command in quotes as described in “Transferring Files with Spaces in the File Names” on page 119.

Specifying the Site Folder (.ini File)

WS_FTP Pro uses *.ini* files to store your site configurations and other program settings. Each site folder (such as the *Games* and *Hardware* folders that are preconfigured by Ipswitch) is represented by an *.ini* file. For example, the site folder named *Games* is represented by a file named *Games.ini* that contains all the site configurations you have saved in the *Games* folder. For more information on storing sites in folders, see “Preconfigured FTP Sites” on page 13 and “Organizing Sites in Folders” on page 26.

When you use the command line to perform a transfer, you must always use the `-i` parameter to indicate which site folder (i.e., which *.ini* file) the site configuration is stored in. For example, use `-i games.ini` if the FTP site is stored in your *Games* folder. (The only time you don't need this parameter is if the site is stored in your *Sites* folder.)

Note

The `-i` argument must be the very first argument following the `ftp95pro` command.

Uploading Files

Let's suppose that in the Classic interface of WS_FTP Pro, you have configured a collection of site properties and named the configured site *Damion*; you have stored the site in the site folder named *Games*.

This site configuration logs you on to an FTP site whose host name is *ftp.Damion.com*. Let's also suppose that on your C: drive, you have a folder named *Sports* and a file named *Tag.doc* in that folder. To upload the *Tag.doc* file to a folder named *Drop* on the *Damion* site, you enter the command name followed by the site name, the source location, and the destination location. At the MS-DOS prompt, type:

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag.doc  
-d Damion:/pub/Drop/Tag.doc
```

or,

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag.doc -d Damion:/pub/Drop/
```

You'll notice that the second option omits the file name from the destination location. You can do this when you want the transferred file to have the same name as it does in the source location. However, note that you *must* enter the trailing slash after the destination folder in order for this to work.

Renaming Files

To rename a file as you upload it, enter a new file name after the destination folder. For example, to upload the *Tag.doc* file and rename it *NewTag.doc* on the FTP site, type:

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag.doc  
-d Damion:/pub/Drop/NewTag.doc
```

Downloading Files

Use the same command syntax as described above for downloading files, except that, for clarity, you might want to place the FTP site before the local system. (WS_FTP Pro will transfer the file from the location following `-s` to the location following `-d`, no matter which you enter first in the command line.)

Let's suppose you want to download a file named *War.doc* from a folder named *Pub* on the *Damion* site, and let's assume you want to copy it to the *Korsak* folder on your hard disk. Type:

```
ftp95pro -i Games.ini -p Damion -s Damion:/pub/Pub/War.doc  
-d local:c:\Korsak\War.doc
```

Tip: You can leave off the `-s` and `-p`, but when you do so, you must enter the source location first, and the destination second. For example,

```
ftp95pro -i Games.ini -p Damion Damion:/pub/pub/War.doc local:c:\Korsak\War.doc
```

FTP Site Accounts and Passwords

When you use a configured site from the command line, WS_FTP Pro uses the User ID, Password, and Account Name you saved in the site configuration.

If you have saved a password with the site, the command line logs you on using the saved password. If you have *not* saved a password with the site, you will receive the regular password prompt.

If you have saved an account name in the site configuration, the command line logs you on using the saved account name. If you have *not* saved an account name, you can use the `-c` argument to specify the account name when you enter the command line. Assuming you are trying to do the first transfer described in this chapter, but want to use an account named *pisa*, you would enter:

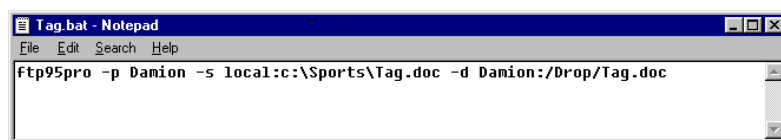
```
ftp95pro -i Games.ini -p Damion -c pisa -s local:c:\Sports\Tag.doc  
-d Damion:/pub/Drop/Tag.doc
```

Using a Batch File

Instead of typing the command at the MS-DOS prompt, you may find it more expedient to enter the command line into a batch file (a text file with the file extension *.bat*). This makes it easier to correct mistakes and to run the same command again.

You run the command by invoking the *.bat* file at MS-DOS prompt, double-clicking the icon for the *.bat* file from within Windows, or running the *.bat* file from another application (such as a program scheduler).

Here is a batch file (for the example at the beginning of this chapter) as viewed from a Windows text editor:



When you run the batch file named *Tag.bat*, WS_FTP Pro uploads the *Tag.doc* file to the *Damion* FTP site.

Note that using a batch file involves placing the command name `ftp95pro` at the beginning of *each* line in the file. Since each instance of the command name starts the WS_FTP Pro application (and connects to the FTP site), you would only use a batch file to work with one command at a time. If, on the other hand, you want to issue a *group* of commands, follow the procedure in “Multiple Folders or Commands” on page 117.

Remember that if a file name has a space in it, you must enclose the entire command in quotes.

File Transfer Modes

You can transfer files in binary mode or in ASCII mode. You'll want to use binary mode to transfer all files unless you know the file contains only text, then you'll want to use ASCII mode.

To specify the transfer mode, you use the `-binary` or `-ascii` argument in the command. To be sure that you transfer the *Tag.doc* file (the first example in this chapter) using binary mode, enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag.doc  
-d Damion:/pub/Drop/Tag.doc -binary
```

If however, the file were a text file named *Tag.txt*, and you want to be sure it is transferred correctly, you'd enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag.txt  
-d Damion:/pub/Drop/Tag.txt -ascii
```

Note

When you *don't* specify the transfer mode in the command line, WS_FTP Pro transfers the file in whatever file transfer mode is the default in the WS_FTP Pro Classic interface. Therefore, if you plan on using the command line more than just occasionally, set the **Startup Transfer Mode** to Auto Detect. (To do this in the Classic, select **Options** from the **View** menu, click the **Session (cont'd)** tab, set the Startup Transfer Mode, and click **Set as Default**.)

Transferring Multiple Files from the Same Location

If all the files you want to transfer are in the same folder, you can use the wildcard characters, `*` and `?`, in the file name. To transfer all files in the Sports folder (described in the first example in this chapter), enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\*. * -d Damion:/pub/Drop/
```

Or, to transfer all `.doc` files in the same folder, enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\*.doc -d Damion:/pub/Drop/
```

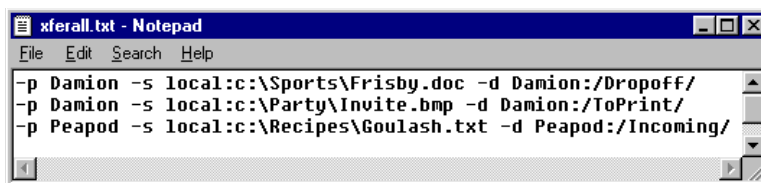
To transfer multiple files not in the same folder, see the next section.

Multiple Folders or Commands

To transfer files to or from multiple source or destination folders, or to issue multiple commands, use the `-m` argument followed by the name of a text file that contains the commands. To transfer files from several locations on the hard disk described in the first example in this chapter, enter (at the MS-DOS prompt or in a batch file) something like:

```
ftp95pro -m xferall.txt
```

where the content of *xferall.txt* (as viewed in Windows Notepad) is:



Note that:

- The command name `ftp95pro` must *not* appear in the text file
- Each line of text must contain only one command line.
- Each command line can contain any of the arguments described in this chapter.
- If a file name has a space in it, the entire command line must be enclosed in quotes.

Pre-scheduled Transfers (“Automated Transfers”)

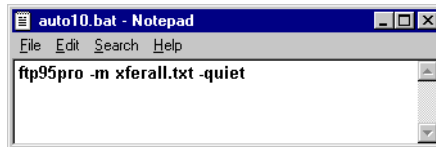
You can use the command line to set up transfers that you want to run automatically at a certain time. To do this, you create a batch file as described above, and then run the batch file using a scheduler such as the AT command in Windows NT, the Task Scheduler in Windows 98 or Internet Explorer 4, or the System Agent in Windows 95.

Note: You can also use the WS_FTP Queuing Utility to do pre-scheduled transfers. For more information, see “Chapter 11: Queuing Transfer Tasks” on page 105.

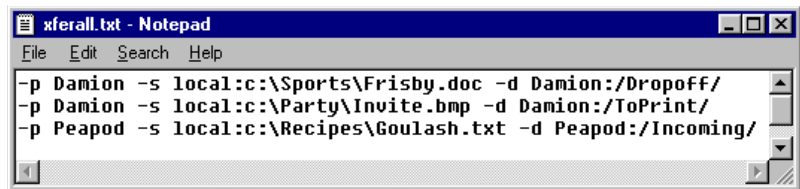
When you use the command line to perform a pre-scheduled transfer, you can use the `-quiet` parameter to prevent WS_FTP Pro from displaying a message box if and when an error occurs. This is particularly useful for

avoiding a situation in which WS_FTP Pro might otherwise prompt for user input, such as clicking the **OK** button in an error message. This way, you can pre-schedule transfers to run automatically when you're not at your computer. (When you return to the computer, you can always check the log file to see if there were any problems.)

To use the examples shown above, you could do a pre-scheduled transfer by creating the following batch file:



as well as the following text file:



Then, you could run the *auto10.bat* file at 10:00 PM each night using a scheduler.

Remember that if a file name has a space in it, you must enclose the entire command in quotes.

Transferring a Folder Containing Subfolders

Since you can't create folders using the command line, you won't be able to transfer a folder by simply specifying the folder name in the command line, or by using wildcards.

To transfer a folder using the command line, you'll need to use some other method to create the folder and its subfolders in the destination location. Then, you can use the same procedure as described in "Multiple Folders or Commands" on page 117. In the text file, you'll have one command line for each subfolder.

For example, let's suppose you want to transfer the entire folder named *Sports* to the *Damion* FTP site. The *Sports* folder contains a number of

files as well as three subfolders named *News*, *Stats*, and *History*.

Once you have created the *Sports* folder and its subfolders in the destination location, create the following text file:



```
DirStruct.txt - Notepad
File Edit Search Help
-p Damion -s local:c:\Sports\*. * -d Damion:/Sports/
-p Damion -s local:c:\Sports\News\*. * -d Damion:/Sports/News/
-p Damion -s local:c:\Sports\Stats\*. * -d Damion:/Sports/Stats/
-p Damion -s local:c:\Sports\History\*. * -d Damion:/Sports/History/
```

The command you enter (at the MS-DOS prompt or in a batch file) is:

```
ftp95pro -m -DirStruct.txt
```

Converting File Names to Lower Case

When uploading files, you can have WS_FTP Pro convert file names to lower case by adding the `-lower` argument at the end of the command line. For example, if the file you want to transfer is named *Tag.doc*, WS_FTP Pro can upload it as *tag.doc*. To do this (as described in the first example in this chapter), enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag.doc
-d Damion:/pub/Drop/ -lower
```

Note

When you use the `-lower` argument, the argument must be at the very end of the command line.

Transferring Files with Spaces in the File Names

If you are transferring a file whose name has spaces in it, you have three options. You can enclose the entire command line in quotes, use the MS-DOS name of the file (as shown in the Dir listing you get from the MS-DOS prompt), or you can do a wildcard transfer using asterisks.

Enclosing the Command Line in Quotes

If the file you want to transfer is named *Tag Top.doc*, enter (at the MS-DOS prompt or in a batch file):

```
"ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag Top.doc  
-d Damion:/pub/Drop/Tag Top.doc"
```

Using the MS-DOS Name

If the file you want to transfer is named *Tag Top.doc* in Windows 95, but appears as *Tag~1.doc* when you use the Dir command at the MS-DOS prompt, you can use the MS-DOS file name to transfer the file. To do this (using the first example in this chapter), enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag~1.doc  
-d Damion:/pub/Drop/Tag~1.doc
```

This creates a file on the FTP site named *Tag~1.doc*.

Doing a Wildcard Transfer

If the file (with spaces in its file name) is the only file in its folder, you can use a wildcard transfer to retain the Windows name (with the spaces). So, if *Tag Top.doc* were the only file in the *Sports* folder on your hard disk, you could enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\*. * -d Damion:/pub/Drop/
```

This creates a file named *Tag Top.doc* on the FTP site.

Using an IP Address, Host Name, or FTP URL

Instead of using the name of a configured site as described in all the previous examples, you can use an IP address, host name, or URL. Note, however, that when you do this, you will automatically be logged on *anonymously*; you will *not* be logged on to an account, nor will you be prompted for a password. So, if you want to use an account, you *must* use the name of a configured site.

However, let's suppose that you want to log on anonymously, and that the host name of the *Damion* FTP site is *ftp.Damion.com* and its IP Address is 111.222.333.444. You can perform the transfer described at the beginning of this chapter by omitting the *-p* (site name) argument and typing the host name, IP Address, or URL in place of the site name.

For example, enter (at the MS-DOS prompt or in a batch file):

```
ftp95pro -i Games.ini -s local:c:\Sports\Tag.doc  
-d ftp.Damion.com:/pub/Drop/Tag.doc
```

or,

```
ftp95pro -i Games.ini -s local:c:\Sports\Tag.doc  
-d 111.222.333.444:/pub/Drop/Tag.doc
```

or,

```
ftp95pro -i Games.ini -s local:c:\Sports\Tag.doc  
-d ftp://ftp.damion.com:/pub/Drop/Tag.doc
```

or,

```
ftp95pro -i Games.ini -s local:c:\Sports\Tag.doc  
-d ftp://damion:/pub/Drop/Tag.doc
```

Extras

There are a few more arguments and uses of the command line that some users have found helpful. These are listed below.

To have WS_FTP Pro display a dialog box that prompts you for the command line, type: `ftp95pro -ask`

To launch the WS_FTP Pro Classic interface and default to the site configuration for the Damion site: `ftp95pro -p Damion`

To prevent WS_FTP Pro from displaying error messages, use the `-quiet` argument. This is useful if you want to do automated transfers when no one is around to respond to a message. An example:

```
ftp95pro -i Games.ini -p Damion -s local:c:\Sports\Tag.doc  
-d Damion:/pub/Drop/Tag.d -quiet
```

Troubleshooting

A file named *xferlog.txt* is created in the data directory. If you are having problems, this is the first thing you should check.

If an *xferlog.txt* file already exists, new messages are appended to it. Therefore, it may be useful to remove this file before executing the troublesome command line; in this way, you can isolate the last FTP action in the *xferlog.txt* file.

Summary

Here is a list of all arguments you can use in the command line. Note that the `-i` argument must precede the `-p` argument when both are used, and that both of these arguments must precede any other arguments.

Arguments (alphabetical)	When to use	Important restrictions
<code>-ascii</code>	Use <code>-ascii</code> when transferring text files.	
<code>-binary</code>	Use <code>-binary</code> when transferring non-text files such as executable programs, word processing documents, and so on.	
<code>-c account</code>	Use <code>-c</code> to work with sites that require an account for the user to log in, or to access partitions. <i>account</i> is the name of your account on the FTP site.	
<code>-d path_and_filename</code>	Use <code>-d</code> to indicate the destination path and desired file name of the file you want to upload or download.	
<code>-i inifile</code>	Always use <code>-i</code> to indicate which site folder the site configuration is stored in. For example, use <code>-i games.ini</code> if the FTP site is stored in your <i>Games</i> folder. (The only time you don't need this parameter is if the site is stored in your <i>Sites</i> folder.)	The <code>-i</code> argument must precede all other arguments.
<code>-lower</code>	Use <code>-lower</code> to have WS_FTP Pro convert file names to lower case letters when you transfer from your PC to an FTP site.	If you use the <code>-lower</code> argument, it must be at the very end of the command.
<code>-m text_file</code>	Use <code>-m</code> to do transfers that involve multiple source locations, multiple destinations, or multiple commands. <i>text_file</i> is the name of the file that contains the commands.	
<code>-p site_name</code>	Use <code>-p</code> to connect to a configured site, where <i>site_name</i> is the name of the site configuration. The site configuration must be in the default <i>.ini</i> file or in the <i>.ini</i> file specified with the <code>-i</code> argument.	The <code>-p</code> argument must precede all arguments except <code>-i</code> .
<code>-quiet</code>	Use <code>-quiet</code> to prevent WS_FTP Pro from displaying message boxes.	
<code>-s path_and_filename</code>	Use <code>-s</code> to indicate the source path and file name of the file you want to upload or download.	

Appendix A: Highlights of RFC 959

This appendix includes some highlights of RFC 959, “File Transfer Protocol.” This information is provided here for those advanced users who want to know more about how FTP works. It will also assist those wishing to interpret the messages at the bottom of the WS_FTP Pro Classic main window or in the log window. Topics included here are:

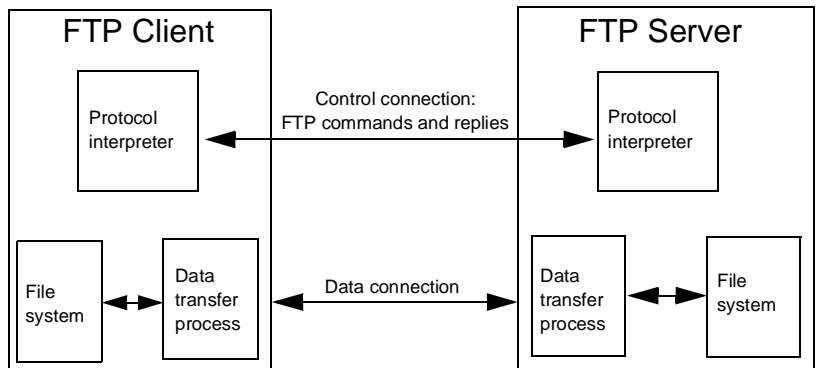
- Basics
- FTP Commands
- FTP Replies (three-digit “error codes”)

For more detailed information, see the RFC itself.

Basics

FTP (File Transfer Protocol) is a specification for how files can be transferred over the Internet. FTP is a client-server protocol in which FTP client software on one system communicates with FTP server software on another. The communication between the FTP client and server is an exchange of commands and replies which are transmitted over a “control connection” between the two systems; this control connection follows the Telnet model.

Files are transferred between the client and server over a second connection, a full duplex connection known as the “data connection.” This connection is between the client’s “data transfer process” and the server’s data transfer process (or between two servers’ data transfer processes).



Both the client and the server have a protocol interpreter. The protocol interpreters receive commands or replies, send commands or replies, and govern the data connection. The server's protocol interpreter listens for a connection from a client's protocol interpreter.

In an "active" transfer, the FTP server's data transfer process initiates, or establishes, the data connection to the FTP client, setting up the parameters for data transfer and storage.

In a "passive" transfer, the server's data transfer process is placed in a passive state to *listen for*, rather than *initiate*, a connection to the data port. In this case, the FTP client initiates the data connection.

FTP Commands

The standard commands that an FTP client (such as WS_FTP Pro) issues to an FTP server are listed here with a brief explanation that has been adapted from RFC 959. The command syntax is presented using BNF (Backus-Naur Form) notation where applicable.

FTP commands may be in any order except that a "rename from" command must be followed by a "rename to" command and the REST (restart) command must be followed by the interrupted service command (e.g., STOR or RETR).

ABOR (ABORT)

ABOR <CRLF>

This command tells the server to abort the previous FTP service command and any associated transfer of data.

ACCT (ACCOUNT)

ACCT <SP> <account-information> <CRLF>

The argument field is a Telnet string identifying the user's account. The command is not necessarily related to the USER command, as some sites may require an account for login and others only for specific access, such as storing files.

ALLO (ALLOCATE)

ALLO <SP> <decimal-integer> [<SP> R <SP>
<decimal-integer>] <CRLF>

This command is required by some servers to reserve sufficient storage to accommodate the file to be transferred.

APPE (APPEND) (with create)

APPE <SP> <pathname> <CRLF>

This command causes the server's data transfer process to accept the data transferred and to store the data in a file at the server site. If the file specified in *pathname* exists at the server site, then the data is appended to that file; otherwise the file specified in *pathname* is created at the server site.

CDUP (CHANGE TO PARENT DIRECTORY)

CDUP <CRLF>

This command is a special case of CWD which allows the transfer of directory trees between operating systems having different syntaxes for naming the parent directory.

CWD (CHANGE WORKING DIRECTORY)

CWD <SP> <pathname> <CRLF>

This command allows the user to work with a different directory or dataset without altering his login or account information.

DELE (DELETE)

DELE <SP> <pathname> <CRLF>

This command causes the file specified in *pathname* to be deleted at the server site.

FEAT

FEAT <CRLF>

This command causes the FTP server to list all new FTP features that the server supports beyond those described in RFC 959. A typical example reply to the FEAT command might be a multi-line reply of the form:

```
C> FEAT
S> 211-Extensions supported
S> SIZE
S> MDTM
S> MLST size*;type*;perm*;create*;modify*;
S> LANG EN*
S> REST STREAM
S> TVFS
S> UTF8
S> 211 end
```

HELP (HELP)

HELP [<SP> <string>] <CRLF>

This command causes the server to send a list of supported commands and other helpful information.

LIST (LIST)

LIST [<SP> <pathname>] <CRLF>

This command causes a list of file names and file details to be sent from the FTP site to WS_FTP Pro.

MDTM (MODIFICATION TIME)

MDTM <SP> <pathname> <CRLF>

This command can be used to determine when a file in the server NVFS was last modified.

MKD (MAKE DIRECTORY)

MKD <SP> <pathname> <CRLF>

This command causes the directory specified in *pathname* to be created as a directory (if *pathname* is absolute) or as a subdirectory of the current working directory (if *pathname* is relative).

MLSD

MLSD [<SP> <pathname>] <CRLF>

If WS_FTP Pro detects that the server is an MLSD server, this command is sent to the server instead of the LIST command.

MLST

MLST [<SP> <pathname>] <CRLF>

This command causes the server to provide data about the single object named, whether a file or directory.

MODE (TRANSFER MODE)

MODE <SP> <mode-code> <CRLF>

The argument is a single Telnet character code specifying the data transfer mode. The following codes are assigned for transfer modes: S - Stream, B - Block, C - Compressed. The default transfer mode is Stream.

Note

This “transfer mode” is not equivalent to the “transfer mode” of the WS_FTP Pro user interface. The “transfer mode” referred to in WS_FTP Pro and its documentation is handled by the **TYPE** command.

NLST (NAME LIST)

NLST [<SP> <pathname>] <CRLF>

This command causes a list of file names (with no other information) to be sent from the FTP site to WS_FTP Pro.

NOOP (NOOP)

NOOP <CRLF>

This command does not affect any parameters or previously entered commands. It specifies no action other than that the server send an OK reply.

OPTS (OPTIONS)

OPTS <SP> <parameter> <CRLF>

This command allows an FTP client to define a parameter that will be used by a subsequent command.

PASS (PASSWORD)

PASS <SP> <password> <CRLF>

The argument field is a Telnet string specifying the user's *password*. This command must be immediately preceded by the user name command, and, for some sites, completes the user's identification for access control.

PASV (PASSIVE)

PASV <CRLF>

This command requests the server's data transfer process to "listen" on a data port (which is not its default data port) and to wait for a connection rather than initiate one upon receipt of a transfer command. The response to this command includes the host and port address this server is listening on.

PORT (DATA PORT)

PORT <SP> <host-port> <CRLF>

This specifies an alternate data port. There are defaults for both the client and server data ports, and under normal circumstances this command and its reply are not needed.

PWD (PRINT WORKING DIRECTORY)

PWD <CRLF>

This command causes the name of the current working directory to be returned in the reply.

QUIT (LOGOUT)

QUIT <CRLF>

This command terminates a USER and, if file transfer is not in progress, closes the control connection. If file transfer is in progress, the connection will remain open for result response and the server will then close it.

QUOTE

QUOTE <string> <CRLF>

The QUOTE command lets you enter any *standard* FTP command. WS_FTP Pro sends it to the FTP site, unedited; it is up to you to determine the command syntax depending on the FTP site you are connected to.

REIN (REINITIALIZE)

REIN <CRLF>

This command terminates a USER, flushing all I/O and account information, except to allow any transfer in progress to be completed. A USER command may be expected to follow.

REST (RESTART)

REST <SP> <marker> <CRLF>

The argument field represents the server marker at which file transfer is to be restarted. This command does not *cause* file transfer but skips over the file to the specified data checkpoint. This command shall be immediately followed by the appropriate FTP service command which causes file transfer to resume.

RETR (RETRIEVE)

RETR <SP> <pathname> <CRLF>

This command causes the server to transfer a copy of the file specified in *pathname* to the client. The status and contents of the file at the server site are unaffected.

RMD (REMOVE DIRECTORY)

RMD <SP> <pathname> <CRLF>

This command causes the directory specified in *pathname* to be removed as a directory (if *pathname* is absolute) or as a subdirectory of the current working directory (if *pathname* is relative).

RNFR (RENAME FROM)

RNFR <SP> <pathname> <CRLF>

This command specifies the old *pathname* of the file which is to be renamed. This command must be immediately followed by a “rename to” command specifying the new file pathname.

RNTD (RENAME TO)

RNTD <SP> <pathname> <CRLF>

This command specifies the new *pathname* of the file specified in the immediately preceding “rename from” command. Together the two commands cause a file to be renamed.

SITE (SITE PARAMETERS)

SITE <SP> <string> <CRLF>

This allows you to enter a command that is *specific to the current FTP site*. WS_FTP Pro prefixes your entry with the word SITE. WS_FTP Pro sends it to the FTP site, unedited; it is up to you to determine the command syntax depending on the FTP site you are connected to.

SITE CPWD

SITE CPWD <SP> <string> <CRLF>

This is a special command you can enter using WS_FTP Pro when the FTP server is a WS_FTP Server from Ipswitch. It changes the user’s password.

SIZE (SIZE OF FILE)

SIZE <SP> <pathname> <CRLF>

This command is used to obtain the transfer size of a file from the server: that is, the exact number of octets (8 bit bytes) which would be transmitted over the data connection should that file be transmitted. This value will change depending on the current STRUcture, MODE and TYPE of the data.

SMNT (STRUCTURE MOUNT)

SMNT <SP> <pathname> <CRLF>

This command allows the user to mount a different file system data structure without altering his login or accounting information.

STAT (STATUS)

STAT [<SP> <pathname>] <CRLF>

This command causes a status response to be sent over the control connection in the form of a reply.

STOR (STORE)

STOR <SP> <pathname> <CRLF>

This command causes the FTP server to accept the data transferred via the data connection and to store the data as a file at the FTP server. If the file specified in *pathname* exists at the server site, then its contents shall be replaced by the data being transferred. A new file is created at the FTP server if the file specified in *pathname* does not already exist.

STOU (STORE UNIQUE)

STOU <CRLF>

This command behaves like STOR except that the resultant file is to be created in the current directory under a name unique to that directory. The “250 Transfer Started” response must include the name generated.

STRU (FILE STRUCTURE)

STRU <SP> <structure-code> <CRLF>

The argument is a single Telnet character code specifying the file structure described in RFC 959. The following codes are assigned for structure: F - File (no record structure) R - Record structure P - Page structure. The default structure is File.

SYST (SYSTEM)

SYST <CRLF>

This command is used to find out the operating system of the server.

TYPE (REPRESENTATION TYPE)

TYPE <SP> <type-code> <CRLF>

The argument specifies the file type. The following codes are assigned:

A = ASCII (text files)

N = Non-print (files that have no vertical format controls such as carriage returns and line feeds)

T = Telnet format effectors (files that have ASCII or EBCDIC vertical format controls)

E = EBCDIC (files being transferred between systems that use EBCDIC for internal character representation)

C = Carriage Control (ASA) (files that contain ASA [FORTRAN] vertical format controls)

I = Image (binary files)

L = Local byte size (files that need to be transferred using specific non-standard size bytes)

The default representation type is ASCII Non-print.

USER (USER NAME)

USER <SP> <username> <CRLF>

The argument field is a Telnet string identifying the user. The user identification is that which is required by the server for access to its file system.

FTP Replies

In the protocol conversation between an FTP client (such as WS_FTP Pro) and an FTP server, at least one server reply is sent to the FTP client in response to an FTP command. A reply consists of a three-digit code, followed by one line of text, and terminated by the Telnet end-of-line code.

Positive Preliminary Replies

These types of replies indicate that the requested action was taken and that another reply is to follow.

110 Restart marker reply.

120 Service ready in nnn minutes.

125 Data connection already open; transfer starting.

150 File status okay; about to open data connection.

Positive Completion Replies

These type of replies indicate that the requested action was taken and that the server is awaiting another command.

200 Command okay.

202 Command not implemented, superfluous at this site.

211 System status, or system help reply.

212 Directory status.

213 File status.

214 Help message on how to use the server or the meaning of a particular non-standard command. This reply is useful only to the human user.

215 NAME system type. Where NAME is an official system name.

- 220 Service ready for new user.
- 221 Service closing control connection. Logged out if appropriate.
- 225 Data connection open; no transfer in progress.
- 226 Closing data connection. Requested file action successful
(for example, file transfer or file abort).
- 227 Entering Passive Mode (h1,h2,h3,h4,p1,p2).
- 230 User logged in, proceed.
- 250 Requested file action okay, completed.
- 257 "PATHNAME" created.

Positive Intermediate Replies

These types of replies indicate that the requested action was taken and that the server is awaiting further information to complete the request.

- 331 User name okay, need password.
- 332 Need account for login.
- 350 Requested file action pending further information.

Transient Negative Completion Replies

These types of replies indicate that the command was not accepted; the requested action was not taken. However, the error is temporary and the action may be requested again.

- 421 Service not available, closing control connection. This may be a reply to any command if the service knows it must shut down.
- 425 Can't open data connection.
- 426 Connection closed; transfer aborted.
- 450 Requested file action not taken. File unavailable (e.g., file busy).
- 451 Requested action aborted: local error in processing.
- 452 Requested action not taken. Insufficient storage space in system.

Permanent Negative Completion Replies

These types of replies indicate that the command was not accepted; the requested action was not taken. The FTP client is "discouraged" from repeating the same exact request.

- 500** Syntax error, command unrecognized. This may include errors such as command line too long.
- 501** Syntax error in parameters or arguments.
- 502** Command not implemented.
- 503** Bad sequence of commands.
- 504** Command not implemented for that parameter.
- 530** Not logged in.
- 532** Need account for storing files.
- 550** Requested action not taken. File unavailable; e.g., file not found, no access.
- 551** Requested action aborted: page type unknown.
- 552** Requested file action aborted. Exceeded storage allocation for current directory or dataset.
- 553** Requested action not taken. File name not allowed.

Appendix B: Textual Error Messages

This Appendix lists common textual error messages. Each error message is followed by an explanation of the error, and some possible workarounds or solutions, if any exist.

Some of these error messages are returned by the FTP protocol and will appear in the WS_FTP log, preceded by a three-digit reply code as described in “FTP Replies” on page 131.

Others of these textual error messages may appear in dialog boxes generated by WS_FTP Pro or your operating system.

For more information, see the **KnowledgeBase** on the Ipswitch web site, www.ipswitch.com.

“Blocking call canceled”

There are several possible causes for this problem. Try these tests in the order shown:

- 1 Disconnect from the FTP site if you are currently connected to it. Then turn on passive mode as described in “Doing Passive Transfers” on page 49. After you have done this, try reconnecting to the site.
- 2 If you still receive this error message, set the network timeout for the site to 120 in the Classic interface:
 - If you are connected to a site, select **Disconnect** from the **File** menu.
 - Select **Connect** from the **File** menu to view the “Connection” dialog box.
 - In the **Configured Sites** list, select the site.
 - Click the **Advanced** tab.
 - Enter 120 for the **Network Timeout**.
- 3 If you still receive this error after making the above changes, try the command line FTP and see if you can connect and how long it takes. Once you know how long it takes to connect, enter this time into the **Network Timeout** setting on the **Advanced** tab of the site properties as described above.
- 4 If you still cannot connect please contact the FTP server administrator for assistance.

“Cannot create file”

This error usually means one of two things:

- The file already exists and is in use; therefore, you cannot overwrite the file.
- You do not have sufficient permission to create the file in the current directory.

“Cannot create socket”

In most cases, this means you should be using the 16-bit version of WS_FTP instead of the 32-bit version.

“Can’t get ‘xxx’ host entry”

This error means that the host name you have entered for the FTP site cannot be resolved to an IP address. (Host names are resolved to IP addresses by a Domain Name Server.)

Check the **Host Name** box on the **Host Info** tab of site properties. It must contain a valid host name or a valid IP address. Enter the host name in this format:

ftp.ipswitch.com

Do *not* use:

http://ftp.ipswitch.com/Ipswitch/Product_Downloads

ftp://ftp.ipswitch.com

“Can't open file for write”

This message (from Windows) indicates that WS_FTP Pro is not able to locate your *Tmp* or *Temp* directories. Go to the MS-DOS prompt and type “set.” Make sure that the *Tmp* and *Temp* variables are listed, and that the directories indicated actually do exist on your hard disk. If not, create a *Temp* variable from the MS-DOS prompt by typing the following (depending on where your Windows directory is located):

```
set temp=c:\windows\temp
```

“Can’t set guest privileges”

If you have a personal account on this FTP site, use the corresponding user ID and password assigned to you by the FTP site administrator (instead of an “Anonymous” login). Make sure the **Anonymous** box is turned off on the **Host Info** tab, and enter the appropriate user ID and password.

“Connection refused”

Either the host is not running an FTP server program, or else the FTP site is accepting connections only from certain clients.

“Directory identifier unavailable”

You get this error message if the connection to the current FTP site has timed out and you try to refresh the display.

“Disk quota exceeded”

The disk quota is not determined by WS_FTP Pro; it exists on the FTP site. You can either delete some files on the site to make room for your upload (if you have permission) or get more space from the site administrator.

“DoDirList failed”

Disconnect from the FTP site if you are currently connected to it. Then turn on passive mode as described in “Doing Passive Transfers” on page 49.

“DoDirList returned 4”

The MTU (Maximum Transfer Unit) setting in your network stack may be incorrect. You can contact your Internet provider to get the proper setting, or you can try 552 or 576 as they are common proper values. For information on changing your MTU setting, go to www.ipswitch.com, click **KnowledgeBase**, and search for “MTU.”

“Error registering class”

You attempted to exit the WS_FTP Pro Classic interface while WS_FTP was trying to make a connection to an FTP site. The only cure for this error is to exit and restart Windows. The next time you want to cancel a connection attempt, click **Cancel** before you click **Exit**.

“Failed data channel”

Disconnect from the FTP site if you are currently connected to it. Then turn on passive mode as described in “Doing Passive Transfers” on page 49.

“File too large to download”

This message is coming from the FTP site that you are connected to. This site has a limit on how large a file you can download.

“Illegal port command”

Disconnect from the FTP site if you are currently connected to it. Then turn on passive mode as described in “Doing Passive Transfers” on page 49.

“Invalid page fault”

This error is usually caused by an incorrect system date or system time, either on your PC or on the FTP site you are connecting to.

“Logon failure; Quitting.”

The FTP site is not recognizing or accepting your user ID and/or password. Contact the FTP site administrator to verify that you are using the correct User ID and password.

“MDTM”

The current FTP site does not support Month-Day-Time-Marking; this means that after the file was uploaded, WS_FTP attempted to preserve the date and time, but the FTP site does not support this feature. However, files transferred correctly. Note that this is not a fatal error, even though it displays in red.

“Port command failed”

Disconnect from the FTP site if you are currently connected to it. Then turn on passive mode as described in “Doing Passive Transfers” on page 49.

“Too Many Parameters Specified in Explorer Interface”

This can happen when you attempt to transfer a file from one FTP site to another, and the file name has spaces in it. You can rename the file, transfer it, and then rename it back to the original name.

“User access denied”

The error “530 user access denied” indicates that you are not properly logged on to the server. Make sure the information on the **Host Info** tab of site properties is correct. Common problems are spaces, case sensitive entries, or incorrect user name or password. If you are unsure whether or not you are using the correct user name and password, contact the FTP site administrator.

Most FTP sites support anonymous logins where you do not have to have an actual account on the FTP site in order to download files; the user ID is the word *Anonymous* and the password is your e-mail address. To test this, try connecting to the Ipswitch FTP site (*ftp.ipswitch.com*) using the user ID “Anonymous.”

If you *do* have to have an actual account on the FTP server, for example, a server where you place your web pages, then you will need to obtain a user ID and password from the server administrator and enter them in the host information tab.

“Write error”

If you get this error when trying to view the directory listing, WS_FTP Pro is not able to locate your *Tmp* or *Temp* directories. Go to the MS-DOS prompt and type “set.” Make sure that the *Tmp* and *Temp* variables are listed, and that the directories indicated actually do exist on your hard disk. If not, create a *Temp* variable from the MS-DOS prompt by typing the following (depending on where your Windows directory is located):

```
set temp=c:\windows\temp
```

Appendix C: Troubleshooting

This chapter lists some of the common FTP connection and file transfer problems. For more information, see our **KnowledgeBase** on the Ipswitch web site, www.ipswitch.com.

Problem: Connecting to an FTP site

If you cannot connect to *any* FTP site and see the message “Cannot connect to *sitename*,” perform the following checks:

- 1 If you are using AOL (America Online), Netcom, or CompuServe, see “Problem: WS_FTP Pro Won’t Work with AOL, Netcom, or CompuServe” on page 142.
- 2 Make sure you have an active dial-up or direct Internet connection. WS_FTP Pro is not a dialer. It calls the Winsock DLL and uses the dialer or direct connection specified there.
- 3 Check to see if you are running the Windows 95 TCP/IP stack.
 - If you *are* running the Windows 95 TCP/IP stack, the domain name server (DNS) in your TCP/IP stack may not be properly configured. Talk to your ISP for the proper values for DNS.
 - If not, you may be running a 32-bit version of WS_FTP Pro over a Winsock that only supports 16-bit operations. You can either get a 32-bit Winsock for your computer, or you can switch to the 16-bit version of WS_FTP Pro. To test this, you can install the 16-bit version of WS_FTP Pro, start WS_FTP Pro, and try to make the connection: if this works, you are running a 16-bit TCP/IP stack.
- 4 Check that you have a valid login name and password. If you do not, try selecting the **Anonymous** check box in the site properties; or, contact the system administrator of the FTP site to which you are trying to connect.

Problem: Connecting Only to Ipswitch FTP Site

If WS_FTP Pro can connect only to the Ipswitch FTP site and nothing else, you are using a pre-release version of WS_FTP which has timed out. It connects to *ftp.ipswitch.com* to allow you to download the current version of WS_FTP Pro.

Problem: Can Only Connect Using IP Address

If WS_FTP Pro can only connect to sites using the site IP address (for example, 123.123.123.123) and not the host name, you need to configure the DNS (Domain Name Server) in your stack. Talk to your network administrator or your Internet provider for the proper values for DNS.

Problem: Connection Closes

In addition to the network timeout setting within WS_FTP Pro, there is also a “server timeout” that is determined by the FTP site. Most FTP sites will shut down the connection to a client such as WS_FTP Pro after a few minutes of inactivity. You can change this setting only on the FTP site, not from WS_FTP Pro. If you are running Windows 3.x, go to the **KnowledgeBase** on the Ipswitch web site (www.ipswitch.com) and search for “slow transfer.”

Problem: Delays Under Windows 3.x

If you find that uploading any file over 25K often takes more than 30 minutes, after which WS_FTP Pro “times out” and disconnects from the site, try adding the following to your SYSTEM.INI file (for WIN3.x):

```
[VNTSPSD]
MaxFramesSize=1000
```

Problem: WS_FTP Pro Won't Work with AOL, Netcom, or CompuServe

If WS_FTP Pro won't work with AOL, Netcom, or CompuServe, you may be using a version of AOL (plus some versions of Netcom and

Compuserve) which requires a 16-bit TCP/IP stack. A 16-bit stack will not work with 32-bit TCP/IP applications. If you are using a 16-bit stack, you will need to run the 16-bit version of WS_FTP Pro (*ftp95pro.exe*, NOT *ftp95pro.exe* or *ftp32pro.exe*), or the 16-bit version of WS_FTP LE (*ws_ftp.exe*, NOT *ws_ftp95.exe* or *ws_ftp32.exe*).

If you are running Windows NT and WS_FTP Pro won't work with AOL, Netcom, or CompuServe, go to the **KnowledgeBase** on the Ipswitch web site (www.ipswitch.com) and search for "Windows NT."

Problem: Only Part of the File is Transferred

If WS_FTP Pro *consistently* returns some number of bytes of a file and can never retrieve the whole file, you need to set the Maximum Transfer Unit (MTU) in your program stack to 576. For more information on setting the MTU, go to the **KnowledgeBase** on the Ipswitch web site, www.ipswitch.com, and search for "MTU."

If WS_FTP Pro *sometimes* does not return a complete file and leaves off from 50 to 512 bytes, you could be using an inadequate network stack. Some network stacks do not properly handle data packets that have the FIN flag set. These stacks improperly return a length of zero to a "blocking recv socket" call and do not make all the data available.

If you're not using the Microsoft TCP/IP stack (part of the Windows 95, 98, 2000, and NT operating systems), contact your network stack provider for an updated version of the network stack.

Problem: File List Missing, Blank, or Unreadable

If you can connect to a FTP site but don't get a directory/folder listing, it may be due to one of several different problems. The procedure below gives you some troubleshooting options.

- 1 Disconnect from the FTP site if you are currently connected to it.
- 2 Change to passive mode as described in "Doing Passive Transfers" on page 49.
- 3 Connect to the site again. If the problem still exists, try the next step.
- 4 Make sure you have a valid *Temp* or *Tmp* folder.

Go to the MS-DOS prompt and type “set.” Make sure that the *Tmp* and *Temp* variables are listed, and that the directories indicated actually do exist on your hard disk. If not, create a *Temp* variable from the MS-DOS prompt by typing the following (depending on where your Windows directory is located):

```
set temp=c:\windows\temp
```

Once you have made sure there is a valid *Temp* or *Tmp* folder, connect to the site again. If the problem still exists, try the next step.

- 5 Change the host type to “Automatic detect.” This will take care of about 90% of all FTP sites. If that doesn't work, see “Problem: Determining the Host Type” on page 144.

Problem: Determining the Host Type

If the FTP site folder/directory listing is missing, blank, or unreadable, follow the steps in “Problem: File List Missing, Blank, or Unreadable” on page 143 before trying the following procedure.

For a complete list of host types supported by WS_FTP Pro, go to the *KnowledgeBase* on the Ipswitch web site (www.ipswitch.com) and search for “host type.”

To figure out the host type of an FTP site:

- 1 Disconnect from the site if you are currently connected to it.
- 2 Enable the Transfer logs. (In the Classic interface, select **Options** from the **View** menu and click the **General** tab. Make sure there is a log file name in the **Log filename** box and that **Enable log** is turned on.)
- 3 Exit WS_FTP Pro and restart it.
- 4 Try to determine the host type from the log.
 - Connect to the site again.
 - Check the log to see if the host type is identified there. If it is, select the corresponding host type on the **Advanced** tab of the site properties. If that doesn't work, try the next step.

- 5 If you have permission to create a test account on the site, do so and then send access information to *ftpd@ipswitch.com*. If this is not possible, go to the next step.
- 6 Log on anonymously. (Change the **UserID** on the **Host Info** tab of site properties to *Anonymous*.)
- 7 Save copies of the log and directory information.
 - Select **Log Window** from the **View** menu and save the log to a file.
 - Click the **DirInfo** button and save the file listing to a file.
 - If, *and only if*, you have completed all the steps above, mail both files to *ftpd@ipswitch.com* along with as much of a description of the FTP site as possible.

Note

Do *not* send mail to this address unless you have been unsuccessful after completing the procedures in “Problem: File List Missing, Blank, or Unreadable” on page 143 and “Problem: Determining the Host Type” on page 144.

Problem: Converting File Names

If you have problems converting file names when you download files from an FTP site, turn on **Prompt for destination file names** as described in “Getting Prompted for Path and File Name” on page 72. You will then be shown the proposed file name and allowed to change it. Alternatively, you can hold the Ctrl key down when you initiate the transfer and you will be prompted for each destination filename.

Problem: Time Displays as 00:00

Occasionally, you may see the time for older files displayed as 00:00. This means that the FTP site cannot furnish WS_FTP Pro with the file times of older files. (WFTPD is an example of a popular FTP site which exhibits this behavior.)

Problem: Timestamp Problems on Uploads

If the FTP site is a Windows NT host, it will always stamp incoming files with Greenwich mean time (GMT). To correct this, enter the time difference in the site properties as described in “Adjusting for a Different Time Zone” on page 66.

When you upload a file to any *other* type of FTP site, the file date and time is automatically updated by the FTP site to the date and time of the transfer. For this reason, the timestamps of the uploaded files on the FTP site are never in sync with the timestamps on your PC and usually appear to be more recent.

Here is a workaround: If you need to synchronize the timestamps on your PC with those on the FTP site, you can download the files after you upload them (provided that you have turned on **Preserve file time on transfer from remote**).

Problem: Unable to Open/View Files and Folders

If you can connect to an FTP site, but cannot open a folder on the FTP site or transfer a file, check your folder and file access privileges on the FTP site. These permissions are set by the site administrator and cannot be changed by WS_FTP Pro.

If you can connect to an FTP site, but the folder and file display is blank or unreadable, see “Problem: File List Missing, Blank, or Unreadable” on page 143.

Problem: Corrupted Files or Strange Characters

You may have transferred a binary file in ASCII transfer mode; this can result in strange characters appearing in the file (such as ^M) or in damage to the file.

Make sure you transfer text files (such as .txt, .html, .htm, .cgi) in ASCII mode and most other files (such as .bmp, .jpg, .exe, .zip) in binary mode.

If you still have problems, verify that you have “hardware flow control” enabled on your modem. If you are not using the Microsoft TCP/IP stack (part of the Windows 95, 98, 2000 or NT operating system), contact your stack vendor.

Index

Numerics

16-bit TCP/IP protocol stack 7
“530 user access denied” 139
550 reply 133

A

ABOR (command) 124
accounts on FTP sites 3, 18, 19
 and the command line 114
ACCT (command) 124
active transfers 124
alerts 55, 69, 72
ALLO (command) 124
Allow Files and Directories to
 be Moved 40
anonymous FTP 3, 16, 19, 25
AOL (America Online) 142
APPE (command) 125
appending files 41
application association 42
ASA (FORTRAN) 130
ASCII files 46, 130
ASCII transfer mode 48
association of files with
 applications 42
attributes for UNIX files 77
auto detect transfer mode 48
auto re-get of failed transfers
 51
autoexec.bat 111
automating file transfers 117

B

batch files 115
binary files 42, 130
binary transfer mode 48
bitmaps 46
“Blocking call canceled” 135
“blocking recv socket” call 143

bmp files 146
browser See Web browser
buffer 52

C

“Can’t get ‘xxx’ host entry”
 error 136
“Can’t open file for write” 136
“Can’t set guest privileges”
 error 137
“Cannot create file” error 136
“Cannot create socket” error
 136
CDUP (command) 125
cgi files 46, 146
changing
 drives 33
 folders 34
 sounds 56
characters (strange) 146
chmod (command) 77
Classic interface (defined) 4
client-server 2
command line 111
command prompt 98, 111
commands
 FTP 87
 sending to FTP sites 24
commenting on an FTP site 25
CompuServe 142
confirmations 55, 69
connecting 15, 141
Connection dialog box 14
connection folders 35, 36
“Connection refused” error 137
connection, retrying 23
control connection 123
Convert Extensions 75
converting file extensions 75
converting file names to
 lowercase 119
corrupted files 146

creating
 configured sites 14
 folders for storing
 configured sites 26
 folders on an FTP site 35
Ctrl key 31, 70, 73, 145
CWD (command) 87, 125

D

data connection 49, 82, 123,
 124
data transfer process 123
date format 67
dates and times
 confirming overwrite of
 newer files 55
 criteria for finding files
 and folders 94
 file 65, 66
 scheduling queued tasks
 109
debug messages 63
“default” firewall 85
DELE (command) 125
deleting
 files and folders 68, 69
 FTP sites 15, 27
destination (defined) 76
“Directory identifier
 unavailable” error 137
directory information 30
directory listing missing 143
directory listings, viewing 30
disconnecting 27
“Disk quota exceeded” error
 137
DNS (Domain Name Server)
 142
“DoDirList failed” error 137
“DoDirList returned 4” error
 137
download (defined) 1
downloading files

- using the command line 114
- dragging and dropping 39, 106, 108
- drives, changing 33

E

- EBCDIC 130
- editing
 - files 43
- Editor/Debugger window 98
- e-mail address 3, 18, 22, 25
- error messages 121, 135
- “Error registering class” error 138
- exe files 46, 146
- executable files 46, 146
- executing files 45
- Explorer interface (defined) 5
- extensions (file name) 75
- extensions to FTP protocol 87

F

- “failed data channel” error 49, 138
- failed transfers 50
- FEAT (command) 125
- features of WS_FTP Pro 6
- file extensions, converting 75
- file listing missing 143
- file listings, viewing 30
- file mask 32
- file name as criteria for finding files 93
- file names with spaces 112, 119
- file size as criteria for finding files 96
- “File too large to download” error 138
- files
 - appending 41
 - ASCII 46

- files (continued)
 - compressed, transferring 46
 - converting names of 145
 - corrupted 146
 - displaying only particular types 32
 - editing 43
 - executables, transferring 46
 - executing 45
 - htm 46
 - html 46
 - masking the display of 32
 - moving 40
 - overwriting 55
 - postscript 46
 - problems viewing 146
 - sorting 31
 - viewing 29, 41, 43
 - wav 56
- filtering the display of files 32
- Find Utility 91
- finding files and folders 30, 91
- “Firewall” as name of a
 - configured firewall 85
- firewall types 82
- firewalls 26, 49, 81
 - router-based 82
- folder listing missing 143
- folders
 - changing 34
 - connection 35, 36
 - creating on an FTP site 35
 - displaying information about 31
 - for storing FTP site configurations 26
 - for storing site configurations 122
 - navigating 34
 - non-empty 68
 - problems viewing 146

- folders (continued)
 - properties 26
 - remembering 34
 - setting initial 35, 36
 - setting startup 35, 36
 - sorting 31
 - storing histories 34
 - with subfolders 118
 - viewing 29
 - with subfolders 68
- Force Lowercase Remote Names 74
- FTP (File Transfer Protocol) 87
 - basics of RFC 959 123
 - client 123
 - client (defined) 2
 - server 123
 - server (defined) 2
- FTP (File Transfer Protocol) (defined) 2
- FTP extensions 87
- FTP protocol 58, 59
- FTP protocol commands 58, 87, 124
- FTP protocol replies 58, 131
- FTP site to FTP site transfers 6
- FTP sites
 - accounts on 3
 - configuring 14, 17
 - connecting to 15
 - deleting 15, 27
 - initialization commands 24
 - naming 17
 - organizing in folders 26
 - ports 23
 - preconfigured 13, 14
 - recently visited 21
 - renaming
 - using configured sites 14
 - viewing contents of 4
- FTP URL 108, 120
- FTP URL (defined) 8

G

gateways 49, 81
group permissions 78

H

HELP (command) 88, 126
hidden files 32, 53
hierarchical folders. *See*
 folders
host information 20
host name of firewall 83
host name of FTP site 18, 142
host type of FTP site 24, 144
htm files 46, 146
html files 46, 146
HTTP 1

I

“Illegal port command” error
 138
images
 uploading 18
incomplete file transfer 143
ini files 122
initial folder 35, 36
initialization commands (to
 FTP sites) 24
installing WS_FTP Pro 7
interfaces of WS_FTP Pro 4
Internet Service Provider (ISP)
 18, 19
interrupted transfers 50
“Invalid page fault” 138
IP address of firewall 83
IP address of FTP site 18, 142
Ipswitch, Inc.
 FTP site 142
 getting software updates
 10
 giving feedback 10
 web site 10

J

jpg files 46, 146

L

L8 transfer mode 48
LIST (command) 88, 126
local area network 2
local file mask 32
Local System (defined) 4
logging on 3, 13, 22
“Logon failure. Quitting.” 138
logs 60
 viewing 59
lowercase letters in file names
 73, 119

M

MDTM (command) 126
MDTM error 66, 138
messages 55, 63, 69, 72
 suppressing with the
 command line 121
messages, error 135
Microsoft Internet Explorer 9
mirror sites 62
mirroring files and folders 101
MKD (command) 126
MLSD (command) 126
MLST (command) 88, 126
MODE (command) 126
modem 2
modes for UNIX files 77
monitoring transfer progress 53
Month-Day-Time-Marking
 138
moving files 40
MS-DOS prompt 111
MTU (Maximum Transfer
 Unit) 53, 137, 143

N

name of file as criteria for
 finding files 93
names (file) with spaces 112,
 119
naming and renaming
 assigning unique 74
 file name extensions 75
 files and folders 70, 72,
 145
 files using lowercase
 letters 73, 119
 files using the command
 line 113
 FTP site configurations 17
 unique names 75
navigating folders 34
Netcom 142
Netscape Navigator 9
network buffer size 52
network stack 7, 141
network timeout 51
NLIST (command) 88
non-empty folders 68
non-print files 130
NOOP (command) 127
notices 55, 69, 72

O

OPTS (command) 127
overwriting files 55
owner permissions 78

P

partial file transfer 143
PASS (command) 127
passive transfers 49, 82, 124
passwords 18, 19, 22
 and the command line 114
PASV (command) 127
patches 10
path 72

- permissions for UNIX files 77
- photographs, uploading 18
- pictures, uploading 18
- PORT (command) 127
- “Port command failed” 139
- port of firewall 83
- port on FTP site 23
- port, remote 23
- postscript files 46
- preconfigured FTP sites. *See* FTP sites.
- pre-scheduled transfers 117
- problems 141
- progress, monitoring 53
- prompts 55, 70, 72, 101
- protocol commands 58
- protocol interpreter 124
- protocol replies 58
- protocol stack 7
- Proxy OPEN (firewall) 82
- pub folder 29
- public folder 3
- PWD (command) 87, 127

Q

- queuing transfer tasks 105, 117
- Queuing Utility 92, 105
- Quick Connect 20
- QUIT (command) 128
- QUOTE (command) 88, 128

R

- recent sites 22
- REIN (command) 128
- remembering folders 34
- Remote Edit uses Shell
 - Execute 42, 43, 45
- remote file mask 32
- remote port 23
- Remote Site (defined) 4
- remote-to-remote transfers 6

- renaming. *See* naming and renaming
- REST command 124
- restarting transfers 50
- RETR (command) 89, 124, 128
- retrying a connection 23
- RFC 959 123
- RMD (command) 128
- RNFR (command) 129
- router-based firewalls 49, 82
- running WS_FTP Pro 13

S

- scheduling transfers 109, 117
- scp file extension 98
- script files 98
- scripting 97, 111
 - example 99
- Scripting Utility 97
- scripts, writing and debugging 98
- server. *See also* FTP site
- server (defined) 2
- server timeout 52, 142
- Set as Default 50, 73, 74, 76, 116
- “set” 139
- Shell Execute 42, 43, 45
- SITE (command) 88, 129
- SITE CPWD (command) 129
- site folders 122
- SITE hostname (firewall) 82
- SITE UMASK 24
- site. *See* FTP sites
- SIZE (command) 129
- size of file as criteria for finding file 96
- SMNT (command) 129
- software patches 10
- sorting files and folders 31, 32
- sounds 56
 - disabling 57

- source (defined) 76
- spaces in file names
 - transferring with
 - command line 112, 119
- stack 7, 141
- starting WS_FTP Pro 13
- startup
 - folder 35, 36
 - transfer mode 29, 47
- STAT (command) 129
- status, monitoring 53
- “sticky bit” 78
- STOR (command) 89, 124, 130
- STOU (command) 74, 130
- strange characters 146
- STRU (command) 130
- suppressing error messages
 - using the command line 121
- Synchronize Utility 101
- synchronizing files and folders 101
- syntax
 - command line 112
 - FTP commands 87
- SYST (command) 88, 130
- system requirements 7

T

- TCP/IP stack 7, 52, 141, 143, 146
- Telnet 123, 130
- Temp directory 41, 139, 144
- Temp folder 41, 139, 144
- text files 46
- text viewer 43
- time displays as 0000 145
- time offset 67
- time zone 66
- time. *See* dates and times
- timeout, FTP server 52, 142
- timeout, network, setting 51

- timestamp problems on upload 146
- timestamps 66
- “Too Many Parameters Specified in Explorer Interface” 139
- transfer modes 126
 - ASCII 46, 48
 - auto detect 48
 - binary 48
 - command line 116
 - default 47
 - defined 29
 - L8 48
 - startup 29, 47
- transfer status dialog box 53
- transferring files
 - See also downloading, uploading
 - ASCII 46
 - binary 46
 - compressed 46
 - from one FTP site to another 6
 - HTML 46
 - images 46
 - jpg 46
 - multiple files using the command line 116
 - photographs 46
 - pictures 46
 - postscript 46
 - scheduling 117
 - text 46
 - with spaces, using command line 119
 - zipped 46
- Transparent (firewall) 82
- troubleshooting 141
- troubleshooting the command line 121
- txt files 146
- TYPE (command) 126, 130

U

- uninstalling WS_FTP Pro 11
- UNIX 77
- UNIX FTP sites 32, 77
- upgrades 10
- upload (defined) 2
- uploading
 - images 18
 - photographs 18
 - pictures 18
 - Web pages 18
- URL (defined) 8
- URL, FTP 120
- USER (command) 131
- “User access denied” 139
- USER fireID@remoteHost (firewall) 82
- user ID 18, 19
 - and the command line 114
- user interfaces of WS_FTP Pro 4
- USER remoteID @remoteHost fireID (firewall) 82
- USER remoteID@fireID @remoteHost (firewall) 82
- USER with no logon (firewall) 82
- Utility
 - Find 91
 - Queuing 92, 105
 - Scripting 97
 - Synchronize 101

V

- Verify Deletions 69
- viewing
 - directory listings 30
 - files and folders 4, 29, 41, 43
 - files and folders, problems 146
 - FTP protocol messages 59
 - logs 59

W

- warnings 55, 69
- wav files 56
- Web browser
 - downloading files from 108
- Web browser integration 8
- Web pages
 - uploading 18
- wildcard characters for finding files and folders 93
- wildcards
 - in command line 118, 120
- Windows 3.x 142
- Winsock DLL 51, 141
- World Wide Web 1, 108
- “Write error” 139
- WS_FTP Find Utility 91
- WS_FTP Pro Development Kit 9
- WS_FTP Queuing Utility 92, 105
- WS_FTP Scripting Utility 97, 111
- WS_FTP Server 9, 129
- WS_FTP Synchronize Utility 101

X

- xferlog.txt 121

Z

- zip files 146
 - transferring 46

WS_FTP Pro

Addendum to User's Guide

Software Version 6.6

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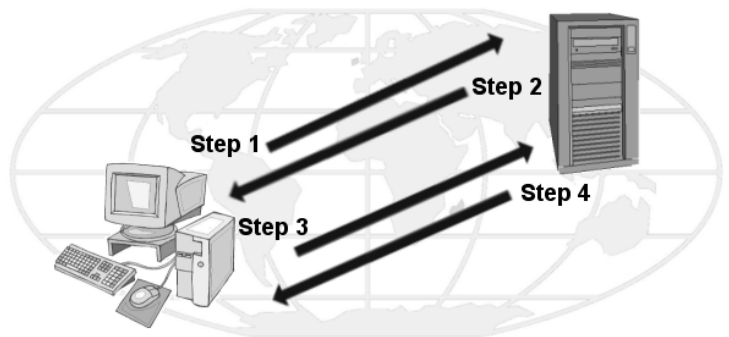
Addendum to WS_FTP Pro User's Guide

This chapter describes what SSL is and how you can configure WS_FTP Pro to make secure (SSL) connections.

What is SSL?

SSL (Secure Socket Layer) is a protocol for encrypting and decrypting data sent across direct internet connections. When a client makes an SSL connection with a server, all data sent to and from that server is encoded with a complex mathematical algorithm that makes it extremely difficult to decode anything that is intercepted.

The following is a step by step illustration of how SSL works.



Step 1. The client makes the initial connection with the server and requests that an SSL connection be made.

Step 2. If the server is properly configured, the server will send to the client its certificate and public key.

Step 3. The client uses that public key to encrypt a session key and sends the session key to the server. If the server asks for the client's certificate in Step 2, the client must send it at this point.

Step 4. If the server is set up to receive certificates, it compares the certificate it received with those listed in its trusted authorities database and either accepts or rejects the connection.

If the connection is rejected, a fail message is sent to the client. If the connection is accepted, or if the server is not set up to receive certificates, it decodes the session key from the client with its own private key and sends a success message back to the client, thereby opening a secure data channel.

The key to understanding how SSL works is in understanding the parts that make SSL itself work. The following is a list of these parts and the role each plays.

Client. In this case, the client is the WS_FTP Pro 6.6 software.

Certificate. The Certificate file holds the identification information of the client or server. This file is used during connection negotiations to identify the parties involved. In some cases, the client's certificate must be 'signed' by the server's certificate in order to open an SSL connection. Certificate files have the .crt ending.

Session Key. The session key is what both the client and the server use to encrypt data. It is created by the client.

Public Key. The public key is the device with which the client encrypts a session key. It does not exist as a file, but is a byproduct of the creation of a certificate and private key. Data encrypted with a public key can only be decrypted by the private key that made it.

Private Key. The private key decrypts the client's session key that is encrypted by a public key. The private key file has the .key ending. Private keys should NEVER be distributed to anyone.

Certificate Signing Request. A certificate signing request is generated each time a certificate is created. This file is used when you need to 'sign' a certificate. Once the Certificate Signing Request file is signed, a new certificate is made and can be used to replace the unsigned certificate.

How to make an SSL connection

To make an SSL connection with a server configured for SSL that you have an account on:

- 1 Follow the directions for configuring a site, being sure to select the Secure (SSL) option.

- 2 After you click **Connect**, WS_FTP 'tells' the server that you want to make an SSL connection. The server then transmits to you an identifying certificate, letting the client know who the server is. If that certificate is already listed in your Trusted Authority database, the connection is made.
- 3 If that certificate is not listed as a trusted authority, the Non-Trusted Authority dialog box appears.
- 4 Select the option you need and click **OK**. If the server does not require a certificate to be returned, the secure connection will be established. All data transmitted between you and the server will be encrypted.

If the server you are attempting to make a connection to asks WS_FTP to send back a certificate, follow the direction for Client Certificate Verification.

Client Certificate Verification

If the server you are attempting to make a connection to requires your client to send an identifying certificate back to the server, you must:

- 1 Configure the site with the Secure (SSL) option selected.
- 2 Create a certificate. Refer to the section “generating a certificate” for more information.
- 3 Send the Certificate Signing Request file to your server administrator.
- 4 Once the server administrator signs the Certificate Signing Request, it will be sent back to you.
- 5 When you receive the file, follow the directions for “Selecting a Certificate” on page 5, selecting the new certificate to go in the **Certificate** box.
- 6 Connect to the server.

Generating a Certificate

To create an SSL certificate:

- 1 From the File menu, select Configure SSL. The SSL Utilities window appears.

- 2 Click the Certificate Creation tab.

The screenshot shows the 'SSL Utilities' window with the 'Certificate Creation' tab selected. The window contains the following fields and text:

- Certificate Set Name:** braemar
- Output Location:** C:\FtpSvc (with a browse button)
- Certificate Information:**
 - City/Town: Augusta
 - State/Province: Georgia
 - Organization: Ipswitch
 - Common Name: braemar.ipswitch.com
 - Pass Phrase: [masked]
 - Pass Phrase Confirmation: [masked]
 - Country: US
 - Email: semar@ipswitch.com
 - Unit: documentation
- Buttons:** Create, Help, Close

- 3 Enter a name in the **Certificate Set Name** box. This will be the name of the certificate that is generated by WS_FTP.
- 4 Click the **Browse (...)** button in the **Output Location** box to select the folder you want the certificate created in.
- 5 Enter information in all of the Certificate Information boxes:
 - City/Town.** City or town where you are located. (Ex. Augusta)
 - State/Province.** State or Province where you are located. (Ex. Georgia)
 - Organization.** Company or individual user name.
 - Common Name.** This can be either the name of the person creating the certificate or the fully qualified domain name of the server associated with the host.
 - Pass Phrase.** Pass phrase that is to be used to encrypt the private key. It is important to remember this pass phrase. The pass phrase can be any combination of words, symbols, spaces, or numbers.
 - Pass Phrase Confirmation.** Re-enter the same pass phrase as above.
 - Country.** The country you are in. This must be a valid two letter country code. (Ex. US)
 - Email.** E-mail address of the person the certificate belongs to.

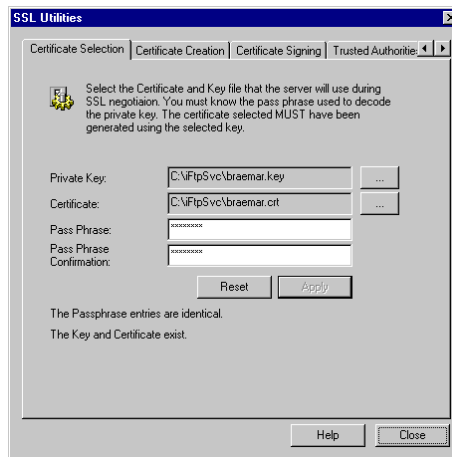
Unit. Name of organizational unit. (Ex. Research and Development)

- 6 After all of the boxes are filled in correctly, click **Create** to generate the keys, certificate, and certificate signing request. If all of the boxes are not filled in, you can not create the certificate.

If you are creating a certificate to be used by WS_FTP Pro, you should send the certificate signing request (by e-mail) to your server administrator. If they require it, they will sign the certificate and return it to you. The returned certificate should be the one you identify in the Certificate Selection tab.

Selecting a Certificate

The Certificate Selection tab is used to choose which private key and certificate you want to use during SSL connection negotiations. If a new certificate has not been created, follow the directions for “Generating a Certificate” on page 3.



To select an SSL Certificate:

- 1 Click the **Browse (...)** button next to the **Private Key** box to select the private key you want to use during SSL negotiation.

- 2 Click the **Browse (...)** button next to the **Certificate box** to select the certificate you want to use during SSL negotiation. The certificate you use must have been created using the key you selected for the **Private Key** box.
- 3 Enter the pass phrase associated with that certificate in both the **Pass Phrase** and the **Pass Phrase Confirmation** boxes. A pass phrase can be any combination of words, symbols, or numbers. It is case sensitive and must be written exactly the same way each time it is used.

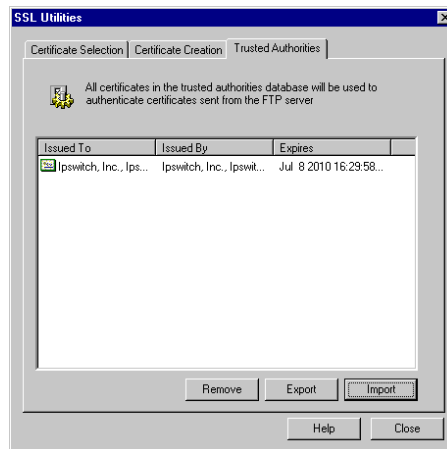
Without the correct pass phrase in both boxes, the certificate and private key cannot be verified and the selection cannot be saved.

- 4 Click **Apply** to save your entries.

Clicking the **Reset** button erases what you have done since the last time new settings were applied.

Trusted Authorities

The Trusted Authorities tab stores a list of certificate names that are recognized by WS_FTP Pro.



Certificate Display

Issued To. Who the certificate was issued to.

Issued By. Who the certificate was signed by.

Expires. Date on which the certificate expires.

Adding a Certificate

To add a certificate to the database:

- 1 Click the **Import** button and select the path and file name for the certificate. The Add Certificate? dialog box appears.



- 2 Review the information on that dialog box and click **Yes** to add the certificate to the database.

Exporting a Certificate

To export a certificate from the Trusted Authorities database:

- 1 Select the certificate you want to copy out of your database.
- 2 Click the **Export** button.
- 3 Select the folder you want to copy the certificate to and enter the name you want to save the certificate file as.
- 4 Click **OK**.

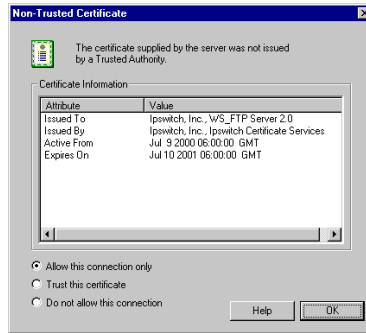
Removing a Certificate

To remove a certificate:

- 1 Select the certificate to be removed.
- 2 Click **Remove**.
- 3 A warning appears advising you to export the certificate before you remove it. Removing the certificate deletes the certificate file.
- 4 Click **OK** to remove the certificate.

Non-Trusted Certificate

When you connect to a server using the SSL connection option, that server sends you a certificate. If that certificate is not listed on the Trusted Authority tab, or if it was not signed by a certificate on this list, this dialog box appears.



Certificate Information

Issued To. Name of the person or company who the certificate belongs to.

Issued By. Name of the person or company who signed the certificate.

Active From. The date on which this certificate was activated.

Expires On. The date the displayed certificate will no longer be a valid certificate.

Options

Allow this connection only. If this option is selected, the connection will be made, but WS_FTP will still not recognize the certificate as a trusted authority. The next time you attempt to connect to this server, this dialog box appears once again.

Trust this certificate. If this option is selected, the connection will be made and the certificate will be added to the trusted authority database in the Trusted Authority tab, so future connections can be made without you being prompted.

Do not allow this connection. If this option is selected, the connection will be terminated.

